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Message



An officer with a right mindset is an officer that a nation aspires for. A right mindset doesn't necessarily comprise unlimited jargon of knowledge rather a right amount of knowledge and its appropriate execution. Especially, when it comes to UPSC and State PSCs preparation, the crux is not to accumulate the knowledge but its effective implementation and utilization in tackling any situation. The situation here can be anything from UPSC CSE Prelims to the major issues that need to be addressed. The journey is hard but it is worth.

Perfect 7 has been part of many UPSC and State PSCs aspirants in their journey of becoming well reputed officers serving nationally and internationally. The magazine itself had gone through constant ebb and flows of change and improvements. Now, that the magazine is in its monthly era, I hope it becomes your perfect preparation partner and guides you through this ever learning endeavor of Civil Services Preparation.

With Best wishes.

Vinay Singh
Founder
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-: Credits :-

PIB, PRS, AIR, ORF, Prasar Bharati, Yojana, kurukshetra, The Hindu, Down to Earth, The Indian Express, India Today, WION, Deccan Herald, The Times of India, Hindustan Times, The Economic Times, BBC, Dainik Jagran, Dainik Bhaskar and Others

Yearly Subscription

Price	Issue	Total	After Discount
140	12	1680	1200

Half Yearly Subscription

Price	Issue	Total	After Discount
140	6	840	600

*Postal charges extra

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Significance of New Criminal Laws Replacing the Colonial Laws

The central government has been contemplating for a while as to how appropriate it is to retain the laws of the British colonial era in today's time. With regard to this, the Central Government constituted several committees from time to time to review the old and irrelevant laws. A review of criminal law was especially necessary which were made during the British colonial period.

The Indian Penal Code, which was enacted by the British in 1860, was made following the circumstances and challenges the country faced during that time. At that time, the nature of crime and criminals were different. The British made a provision to punish those who committed revolution, violence, rebellion or rioting against the British. Since then, there has been a big difference in the nature of crimes like murder, loot, arson, criminal conspiracy and economic crimes. The nature of crimes against women has also seen a massive change and severity. Therefore, re-enacting or redefining these laws was necessary. Indeed, the central government has worked towards ending all traces of British slavery in the last few years. There were several discrepancies in the laws of the Indian Penal Code, 1860, Criminal Procedure Code (1898), 1973 and the Indian Evidence Act, 1872, made by the British and passed by the English Parliament.

From July 1, India has replaced its colonial-era criminal laws with a set of three new penal laws. The Indian Penal Code of 1860 was substituted by the Bharatiya Nyaya Sanhita (BNS), the Code of Criminal Procedure of 1973 gave way to the Bharatiya Nagarik Suraksha Sanhita (BNSS), and the Indian Evidence Act of 1872 was replaced by the Bharatiya Sakshya Adhinyam (BSA). These laws were first introduced by the Centre on August 11 last year, following which they were referred to a 31-member Parliamentary Standing Committee headed by MP Brij Lal for review. The revised bills were later introduced in the Lok Sabha by Union Home Minister Amit Shah on December

12 and received Presidential assent on December 25.

The Government of India believes that these three abolished laws were made to strengthen and protect the British rule and their purpose was to punish, not to give justice. The central government has clarified that the basic goal of the three new laws will be to protect all the rights given by the Constitution to Indian citizens. These laws will aim to give justice not punish. Under the new laws, a very important decision has been taken to abolish sedition which will have far-reaching consequences. The central government has abolished sedition through new criminal laws because India is a democracy and everyone has the right to speak.

Provision for re-management of criminal laws in India:

The earlier three laws, which were passed by the British Parliament in a total of 475 places, were full of signs of slavery. The current laws include:

- ❖ Bharatiya Nagarik Suraksha Sanhita, which replaced the CrPC, has 533 sections. 160 sections have been changed, 9 new sections have been added and 9 sections have been repealed.
- ❖ The Bharatiya Nyaya Sanhita, which replaced the IPC, will now have 356 sections. 175 sections have been changed, and 8 new sections have been added while 22 sections have been repealed.
- ❖ The Bharatiya Sakshya Adhinyam, which replaced the Indian Evidence Act, will now have 170 sections

instead of the earlier 167. Further, 23 sections have been changed, 1 new section has been added and 5 sections have been repealed.

- ❖ The law expands the definition of documents to give legal validity to electronic or digital records, e-mails, server logs, computers, smartphones, laptops, SMS, websites, locational evidence, mail, and messages available on the device. Again, provision has been made in this law to digitize the entire process from case diary, case diary to charge sheet and charge sheet to judgment.
- ❖ A special provision has been made to justify this law and allow it to work following the procedure established by law. A new provision is that the videography has been made compulsory at the time of search and seizure, which will be part of the case and it will not implicate innocent citizens, no charge sheet will be valid without such recording by the police. No government will be able to withdraw a case of imprisonment of 7 years or more without listening to the victim, this will protect the rights of the citizens.
- ❖ The forensic team's visit to the crime scene of offences punishable by 7 years or more is compulsory, through which the police will have scientific evidence, after which the chances of the convicts being acquitted in court will be greatly reduced.
- ❖ For the first time, the provision of e-FIR has been added, every district and police station will have a police officer who will inform the family of the arrested person online and in person about his arrest.
- ❖ In the case of sexual violence, the statement of the victim has been made compulsory and in the case of sexual harassment, the video recording of the statement has also been made compulsory. It will be mandatory for the police to give the status of the complaint within 90 days and thereafter every 15 days to give the status to the complainant.

New provisions in respect of charge sheet and accused person:

- ❖ In the event of a crime, the most important process is to file a charge sheet against the offender and the manner of filing the charge sheet should be such, that no person can be falsely implicated in a false case and the authorities filing the charge sheet do not file a false charge sheet. Keeping these requirements in mind, the new criminal laws have set a time limit of 90 days for filing a charge sheet and depending on the circumstances, the court will be able to give an additional 90 days of permission, thus concluding the

investigation within 180 days and sending it for trial. The court will now be obliged to give notice of framing of charges to the accused person within 60 days. The Hon'ble judge will have to give the decision within 30 days of the completion of the argument, this will not keep the decision pending for years and the decision will have to be made available online within 7 days.

New penal law for crime against women and children:

- ❖ For the first time, sexual intercourse on false promises of marriage, employment and promotion and false identity have been criminalized. In all cases of gang rape, a provision has been made for 20 years of imprisonment or life imprisonment, while in case of crime with girls below 18 years of age, provision of the death penalty has also been made.
- ❖ For mob lynching, seven years of life imprisonment and the death penalty have been kept. There was no provision for snatching mobile phones or women's chains, but now a provision for this has also been kept in the new law. The punishment for a person committing crimes against children has been increased from 7 years to 10 years; a provision has also been made to increase the amount of fine in many crimes.

Definition of Terrorism under new law:

- ❖ All the British-era criminal laws that India had earlier had no interpretation of terrorism. But now when the Indian Penal Code, 1860 has been replaced by the Bharatiya Nyaya Sanhita, it has explained terrorism and its scope. Now offences like armed rebellion, subversive activities, separatism, and challenging the unity, sovereignty and integrity of India have been interpreted in this law for the first time. Apart from this, a new provision of different types of stringent punishment against inter-state gangs and organized crimes has also been added to this law. A provision has also been made for the attachment of property of proclaimed offenders. There is also a provision for punishment for heinous crimes like mob lynching.
- ❖ In case of inactivity due to grievous injury and minor injury, there was a provision of 7 years imprisonment, now they are separated into two. Further, in case of permanent disability or brain death, there is a provision of 10 years or life imprisonment. The punishment for committing crimes against children has been increased from 7 years to 10 years. A provision has also been made to increase the amount of fines for many offences. There is also a provision of 10 years imprisonment for criminals who escape from custody. There were many

cases of use of sentence for political gains, now the death penalty can be commuted to life imprisonment, life imprisonment to a minimum of 7 years and 7 years imprisonment to a minimum of 3 years and no culprit will be spared.

Challenges and Apprehensions:

- ❖ The three new criminal laws have come into force in the country amidst widespread fears that the policing and judicial systems are not yet ready for their introduction. Except for reports of basic training for station-house police personnel, occasional workshops, and an upgrade to the Crime and Criminal Tracking Network and Systems to facilitate electronic complaint filing, the exact level of preparedness among the upper and lower echelons of the police remains unclear.
- ❖ There are concerns that the laws were not fully debated in the legislature, despite a Standing Committee of Parliament reviewing the draft and recommending some changes, nor widely discussed with civil society. Some worry that certain new provisions, such as the one allowing police custody in multiple tranches, could significantly increase police powers. Additionally, the

inclusion of 'terrorism' as an offence in ordinary penal law, alongside the existing special anti-terrorism law, may cause confusion.

- ❖ Nevertheless, the Centre's announcement that States are free to make their own amendments is positive, along with procedural reforms like mandatory registration of FIRs regardless of jurisdiction and the introduction of videography for searches and seizures.

Changes in both the process and vision of the criminal justice system:

- ❖ The central government believes that in the current laws, heinous crimes like homicide or mistreatment of women have been kept very low and crimes like sedition, loot of treasury, and attack on a government official have been kept above these. The central government is changing this approach and the first chapter in these new laws will be on crime against women and children. The second chapter will be on human slaughter and crimes against the human body. The Government of India believes that these laws have been brought by taking a very principled decision to bring the citizens to the center instead of governance.

Short Issues

Statutory Bail and Undertrial Prisoners

Why in News:

The Delhi High Court recently granted statutory bail to a JNU scholar and student activist in a 2020 communal riots case involving sedition allegations.

Background:

- The JNU scholar and student activist was charged with sedition for allegedly making inflammatory speeches at Aligarh Muslim University and Jamia Millia Islamia regarding the Citizenship Amendment Act, 2019 (CAA). Later, Section 13 of the Unlawful Activities (Prevention) Act, 1967, was invoked against him, which prescribes a maximum punishment of seven years.
- He was granted bail on technical grounds as under the Section 436-A of the CrPC, where an accused

is granted bail if he has served half of the maximum period of imprisonment prescribed for the offence.

What is Section 436-A of CrPC:

- 436-A of the CrPC reads: "Where a person has, during the period of investigation, inquiry or trial under this Code of an offence under any law (not being an offence for which the punishment of death has been specified as one of the punishments under that law) undergone detention for a period extending up to one-half of the maximum period of imprisonment specified for that offence under that law, he shall be released by the Court on his personal bond with or without sureties."
- This provision, introduced in 2005 to address the rising population of undertrials in prison, is especially helpful for those booked for offences carrying shorter sentences.
- National Crime Records Bureau data for 2022 shows there were 63,502 undertrials nationwide charged with offences carrying sentences of less than two years.

- **Statutory Bail:** The provision of statutory bail under Section 436A imposes a statutory limit on detention in cases where trial has not yet commenced. As per the provision, if an undertrial has been in custody for more than half of the maximum period of imprisonment prescribed for the offence (excluding cases where the death penalty is a possible punishment), they are entitled to be released on bail on their personal bond, with or without sureties.
- However, if the Court denies this statutory relief, it must provide written reasons for the refusal. Additionally, in computing the detention period, any delay in proceedings caused by the undertrial himself is excluded from the total time period considered.

Important cases:

- **Satender Kumar Antil v. Central Bureau Of Investigation, 2022:** The Supreme Court emphasized that this provision must be followed strictly and that bail applications are not required if delays are not caused by the accused. The Court stated that the power to deny default bail should be used sparingly, as the provision supports personal liberty under Article 21 of the Constitution. Justices Sanjay Kishan Kaul and MM Sundresh clarified that this relief also applies to special laws like the UAPA, PMLA, and NDPS Act unless specific provisions state otherwise.
- **In Vijay Madanlal Choudhary and Ors v. Union of India and Ors (2022),** the Supreme Court reiterated that default bail under Section 436A of the CrPC would also be applicable in PMLA cases where obtaining regular bail is nearly impossible due to stringent provisions.

-: Prelims Insights :-

About Undertrial Prisoners:

- An undertrial prisoner is an accused person who is kept in judicial custody during the time their case is being heard in the court.

Rights enjoyed by Undertrial Prisoners:

- Right to a speedy and a fair trial
- Right against inhuman treatment
- Right to legal assistance
- Right to meet family

Other protections for undertrials:

- For all bailable offences, courts must grant bail under

Section 436 CrPC if the accused is willing to furnish a bail bond. In non-bailable offences, granting bail is at the court's discretion.

- To prevent lengthy pre-trial incarceration, courts also grant default bail. Under Section 167(2) CrPC, the police have 60 days to complete the investigation and file a report for most offences.
- For offences punishable by death, life imprisonment, or a minimum of 10 years in prison, this period extends to 90 days. If the police do not file the chargesheet within these periods, default bail is granted (for IPC crimes). Stringent laws like the UAPA allow longer investigation timelines.

Initiatives taken to address the issue of undertrial prisoners are as follows:

- Insertion of Section 436A in the Code of Criminal Procedure (CrPC).
- The concept of plea bargaining has been introduced by inserting a "Chapter XXIA" on "Plea Bargaining" (Sections 265A to 265L) in the Code of Criminal Procedure, 1973, which enables pre-trial negotiation between the defendant and the prosecution.
- E-prisons Software, which is a Prison Management Application integrated with Interoperable Criminal Justice System provides facility to State Jail authorities to access the data of inmates in a quick and efficient manner and helps them in identifying the inmates whose cases are due for consideration by the Under Trial Review Committee, etc.
- The Model Prison Manual 2016 circulated to all States/ Union Territories has specific chapters on "Legal Aid" and "Undertrial Prisoners", etc, which provide detailed guidelines on the facilities which may be provided to undertrial inmates, namely legal defence, interview with lawyers, application to Courts for legal aid at Government cost etc.
- The State Legal Services Authorities have established Legal Service Clinics in jails, which provide free legal assistance to persons in need.
- The National Legal Services Authority had prepared a Standard Operating Procedure (SOP) for Under-Trial Review Committees, which has been circulated by MHA to all States/Union Territories for making best use of the same and provide relief to prisoners.

Atal Innovation Mission

Why in News:

Atal Innovation Mission (AIM) has launched initiative to

promote innovation and sustainability in India.

AIM-ICDK Water Challenge 4.0:

- This is the fourth edition of the AIM-ICDK Water Innovation Challenge, which is a collaboration between AIM, the Denmark Embassy in India, Innovation Center Denmark (ICDK) and the Denmark Technical University (DTU).
- It is an initiative by the Atal Innovation Mission (AIM) to address critical water-related challenges through inventive solutions.

Key details include:

- Selected teams will participate in the global Next Generation Digital Action program.
- Engagement with young talents from nine countries.
- Opportunity to showcase innovations at the Digital Tech Summit in Copenhagen.
- Two entry tracks: Students and young entrepreneurs (both under 35).
- Focus on digital solutions, inclusion, and universal design principles.
- Innovations for You Handbook (5th edition): This handbook spotlights entrepreneurs in India who are working towards the United Nations' Sustainable Development Goals (SDGs). This edition features 60 entrepreneurs from different parts of India, each contributing to societal betterment through sustainable innovations.

About Atal Innovation Mission (AIM):

- Atal Innovation Mission (AIM) is a flagship initiative by the Government of India, launched in 2016 under NITI Aayog to promote a culture of innovation and entrepreneurship in the country.
- Develop programs and policies to foster innovation.
- Provide a platform for collaboration among stakeholders.
- Create awareness and an umbrella structure to oversee the innovation ecosystem.

Key Initiatives by AIM include:

- **Atal Tinkering Labs (ATL):** Fostering innovation in schools.
- **Atal Incubation Centres (AIC):** Supporting startups and entrepreneurs.
- **Atal Community Innovation Centres (ACIC):** Serving unserved regions.
- **Atal New India Challenge (ANIC):** Promoting product and service innovations.
- **ARISE-ANIC challenges:** Encouraging startup/MSME innovation.

- **Mentor of Change:** Mentorship and partnerships.
- **iCRESt:** Incubator capabilities enhancement for a robust ecosystem.

NOTA

Why in News:

In the General Elections 2024 held in India, NOTA received more than 2 lakh votes in Indore, Madhya Pradesh, setting a new record. This is the highest number of NOTA votes in the history of India. The previous record was set in Gopalganj, Bihar, with 51,660 votes in the 2019 elections.

About NOTA:

- NOTA stands for "None of the Above". It is a ballot option in some elections that allows voters to indicate that they do not support any of the candidates or options listed.
- NOTA is often used in elections where voters are dissatisfied with all the candidates or want to protest the lack of a suitable candidate.

Some key aspects about NOTA:

- The Supreme Court of India directed the Election Commission of India to include NOTA in elections to the Lok Sabha and respective state legislative assemblies in the PUCL vs. Union of India judgment of 2013.
- The NOTA option was first used in the 2013 legislative assembly elections held in four states Chhattisgarh, Mizoram, Rajasthan, and Madhya Pradesh, and the union territory of Delhi.
- ECI has stated that even if the number of votes against NOTA is more than the number of votes secured by the candidates, the candidate who secures the most votes among the contesting candidates shall be declared to be elected.
- In a clarification released in 2013, ECI has stated that votes polled for NOTA cannot be considered for determining the forfeiture of security deposit.
- In 2014, ECI introduced NOTA in Rajya Sabha elections. However, the Supreme Court in 2018 scrapped 'None Of The Above' (NOTA) option in Rajya Sabha elections.
- In 2015, Election Commission of India announced the symbol for 'None of the Above' option, with the design being created by National Institute of Design (NID), Ahmedabad.
- NOTA has won more votes than many political parties that contested in many elections since its introduction.

Way Forward:

Now, it is need of the hour to introduce consequences for elections where NOTA wins, like re-elections or debarring candidates. This will make democracy more vibrant and representative.

RTI Act

Why in News:

The Madras High Court has ruled that co-operative societies do not fall under the RTI Act of 2005.

Key aspects of the ruling include:

- Cooperative societies registered under the Tamil Nadu Cooperative Societies Act do not fall within the definition of "public authority" under Section 2(h) of the RTI Act.
- The court quashed an order directing a cooperative society to disclose loan details to a member, stating that cooperative societies are autonomous bodies and not bound by the RTI Act.
- The ruling relied on a 2013 Supreme Court decision and a 2015 Madras High Court decision, which held that cooperative societies are not covered under the RTI Act.
- The court emphasized that cooperative societies are not statutory bodies performing public functions and do not fall under the definition of "the State" as defined under Article 12 of the Constitution.

About RTI Act, 2005:

- The Right to Information (RTI) Act, 2005 is landmark legislation in India that enables citizens to access information from public authorities.

Key provisions:

- **Definition of Public Authority:** The Act covers all constitutional authorities, government bodies, and institutions substantially funded by the government.
- **Rights of Citizens:** Citizens have the right to access information, inspect documents, and obtain certified copies.
- **Exemptions:** Information related to national security, defense, and personal information are exempt from disclosure.
- **Public Information Officers (PIOs):** Each public authority must designate PIOs responsible for providing information.
- **Procedure:** Citizens can submit requests to PIOs, who must respond within 30 days (48 hours in life or liberty matters).

- **Appeals:** Aggrieved parties can appeal to higher authorities, including the Central/State Information Commissions.
- **Penalties:** PIOs may face penalties for failure to provide information or deliberate delay.
- **Suo Motu Disclosure:** Public authorities must voluntarily disclose certain information, like their functions and activities.

Conclusion:

The RTI Act is a crucial legislation that promotes transparency and accountability in public authorities. It's important to note that the Act exempts certain categories of information from disclosure, including those related to defence, national security, and personal details, as per Section 8. However, the Act aims to strike a balance between the need for transparency and the need for confidentiality in certain matters. Overall, the RTI Act's provisions and exemptions are designed to ensure that citizens have access to information that is essential for the functioning of a healthy democracy.

Living Will

Why in News:

Justice M S Sonak, who serves on the Goa Bench of the Bombay High Court, became the first person in Goa to register a living will.

About Living Will:

- A living will is a legal document that allows individuals to specify their medical treatment preferences in advance, should they become unable to communicate due to a vegetative state or other incapacitating conditions.
- The living will, also known as an advance directive, may include preferences regarding life-sustaining treatments, such as the use of life support.

History of living will:

- **1994 and 1996:** The Indian Supreme Court considered whether "right to die" was included in the "right to life" in the cases of P. Rathinam vs Union of India and Gian Kaur vs State of Punjab.
- **2011:** The issue of passive euthanasia gained traction when Pinki Virani petitioned the Supreme Court for permission to end life-support for Aruna Shanbaug, who had been in a vegetative state since a sexual assault in 1973.
- **2018:** The Supreme Court legalized passive euthanasia and created a process for the "living will," or advance

- medical directive.
- **2019:** A person in Chandigarh executed India's first living will.
- **January 2023:** The Court streamlined the process for creating a living will, removing the requirement for judicial approval.
- **March 2024:** 30 people in Thrissur, Kerala, executed living wills.

About Passive euthanasia

- Passive euthanasia refers to the withdrawal or withholding of medical treatment or life-sustaining measures, allowing a terminally ill or vegetative patient to die naturally. It is also known as "indirect euthanasia" or "negative euthanasia".
- In India, passive euthanasia was legalized in 2018 by the Supreme Court in the landmark case of Common Cause vs Union of India. The court allowed patients to execute a "living will" or advance medical directive, specifying their preferences regarding medical treatment in case they become incapable of communicating.

Key aspects of passive euthanasia in India:

- Withdrawal of life-sustaining treatment, such as ventilators or feeding tubes.
- Withholding of medical treatment, like antibiotics or surgery.
- Natural death due to the progression of the underlying illness.
- Applies to terminally ill or vegetative patients with no chance of recovery.
- Requires a living will or advance medical directive.
- Implemented by healthcare providers, with the consent of family members or a designated guardian.
- Passive euthanasia is distinct from active euthanasia, which involves administering a lethal substance to end life and is still not legal in India. The debate around euthanasia raises ethical, moral, and legal questions, balancing individual autonomy and the right to life with concerns about palliative care and the potential for abuse.

Conclusion:

Justice M S Sonak's decision to register a living will sets a significant precedent in Goa and India. By exercising his right to autonomy and dignity, he demonstrates the importance of advance care planning and having a say in one's medical treatment. This development highlights the progress made in India's legal framework regarding end-of-life care and passive euthanasia, empowering individuals to make informed choices about their health and well-

being. As a High Court judge, his action may inspire others to consider executing a living will, promoting a larger conversation about the value of advance directives and the significance of respecting individual autonomy in healthcare decision-making.

New Government at Centre

Why in News:

President Droupadi Murmu administered oaths to the Central Council of Ministers of the new NDA government . Led by Prime Minister Narendra Modi, the Council of Ministers (COM) is larger in strength compared to the previous term, featuring 30 cabinet ministers, five Ministers of State (Independent Charge) and 36 Ministers of State.

About Council of minister:

- The Central Council of Ministers is led by the Prime Minister and plays a vital role in government policy-making.
- **Constitutional provision:** The Council of Ministers is constituted under Article 74 of the Constitution.
- **Aid and advice:** The Council is required to aid and advise the President in the exercise of their functions (Article 74).
- **Collective responsibility:** The Council is collectively responsible to the Lok Sabha (House of the People) as per Article 75(3).
- **Appointment by President:** The President appoints the Prime Minister and other Ministers on the advice of the Prime Minister (Article 75).
- **Council's role:** The Council has the responsibility to formulate policies and decisions, as per Article 73.
- **Oath of office:** Ministers take an oath of office and secrecy, as specified in Article 75(4).
- **Responsibility to Parliament:** The Council is responsible for answering questions and providing information to Parliament (Article 75(2)).
- **Minister's tenure:** A Minister's tenure is co-terminus with the term of the Prime Minister, unless they resign or are removed (Article 75(5)).
- **Constitutional validity:** The Council's decisions and actions are subject to judicial review, ensuring they conform to the Constitution.
- The size of this council should not exceed 15% of the strength of the Lok Sabha, or the House of the people.
- Article 88 empowers the ministers to speak or otherwise participate in proceedings in both the Lok Sabha and

Rajya Sabha, as well as any joint session of both houses or any Parliamentary committee they may be a part of. However, it does not guarantee them the right to vote.

What is the role of the Prime Minister in the COM?

- The Prime Minister is the head of Central Council of Ministers in an executive capacity. The position he holds is often described as “first among equals”, wherein the PM has a unique role and is considered the primary leader of the COM, but is nevertheless equal to his ministers.
- PM is responsible for decision-making on all important policy issues and other portfolios not allocated to any other minister.
- The Prime Minister additionally serves as head of the Cabinet Secretariat, the government body which supervises the day-to-day administration of the government and the conduct of business between ministries. Additionally, he heads the NITI Aayog and the Appointments Committee of the Cabinet.

Who are the Cabinet Ministers?

- The cabinet ministers are ranked as the senior-most in the council, second only to the Prime Minister. They oversee the strategic and important ministries of the Central government related to Home Affairs, Finance, Defence, etc. with the authority to organise and attend meetings and make important policy decisions.

Who are the Ministers of State (Independent Charge)?

- Ministers of state are junior members of the COM. A Minister of State (Independent Charge) is empowered to administer their respective ministry without oversight from cabinet ministers or other members of the Union government.

Who are the Ministers of State?

- As opposed to a Minister of State (Independent Charge), a Minister of State does not enjoy the foremost administrative duties over a ministry, but assists a cabinet minister with the same, and is responsible for specific functions as delegated to them by their superior.

About Cabinet Committees:

- The Cabinet committees are extra-constitutional in emergence, meaning they are not mentioned in the Constitution. The Prime Minister sets up these committees and assigns specific functions to these committees. All committees except Cabinet Committee on Accommodation and Cabinet Committee

on Parliamentary Affairs are headed by Prime Minister.

- The membership of each committee varies from three to eight. Usually, only Cabinet ministers are members of these committees. However, it is not unheard of for non-Cabinet ministers to be members or special invitees to committees. If the Prime Minister himself is a member of any such committee, he acts as the head of that committee.
- The committees resolve issues and formulate proposals for the consideration of the Cabinet and take decisions on matters assigned to them. The Cabinet is empowered to review such decisions.
- The Manmohan Singh government had as many as 12 Cabinet committees, apart from dozens of Groups of Ministers (GoMs) and Empowered Groups of Ministers (EGoMs).
- There are eight Cabinet committees at present — the Appointments Committee of the Cabinet, Cabinet Committee on Economic Affairs, Cabinet Committee on Political Affairs, Cabinet Committee on Investment and Growth, Cabinet Committee on Security, Cabinet Committee on Parliamentary Affairs, Cabinet Committee on Employment & Skill Development, and Cabinet Committee on Accommodation.
- The committees on investment and employment were innovations introduced by the Modi government in 2019.

India's First Joint Doctrine For Cyberspace

Why in News:

The Chief of Defence Staff, General Anil Chauhan, released India's first joint doctrine for cyberspace operations, which includes a blueprint for warfare in cyberspace .

Key points on doctrine:

- This doctrine is a significant step towards achieving greater jointness and integration within the Indian Armed Forces and is expected to guide commanders in conducting cyberspace operations.
- The doctrine emphasizes the importance of understanding the military aspects of cyberspace operations and provides conceptual guidance to commanders, staff and practitioners in planning and conducting operations in cyberspace.
- The doctrine emphasizes the need to integrate cyberspace operations into the national security fabric

to evolve the "ends, ways, and means" to create an advantage and influence events in all operational environments.

- The doctrine aims to raise awareness in warfighters at all levels.

Importance of the doctrine:

- The doctrine will guide tri-services in planning and conducting cyberspace operations in the current complex military operating environment.
- It will give impetus to the ongoing process of integration being actively pursued by the Army, IAF and Navy.

About Cyber warfare:

- Cyber warfare indeed refers to actions taken in cyberspace by state or non-state actors that threaten a nation's security or are conducted in response to a perceived threat.

Type of cyber warfare:

- **Cyber terrorism:** Premeditated disruptive activities aimed at causing harm or furthering ideological objectives.
- **Cyber fraud:** Attacks aimed at monetary gain or related benefits.
- **Cyber spying:** Attacks aimed at gaining information for the perpetrators.
- **Cyber stalking or bullying:** Attacks designed to frighten and intimidate individuals.

Consequences of cyber warfare:

- Economic loss
- Political manipulation
- Disruption of critical infrastructure
- Compromised national security
- Psychological harm to individuals

How much vulnerable India is to cyberattacks?

- **Inability to prevent attacks:** Indian organizations were only able to thwart 58% of cyberattacks in the past two years.
- **Lack of resources:** 78% of Indian organizations reported that they need more resources dedicated to cybersecurity.
- **Lack of skilled cybersecurity professionals:** India faces an estimated shortage of one million cybersecurity professionals.
- **Regulatory and policy gaps:** Existing laws and regulations struggle to keep pace with rapid technological advancements, creating vulnerabilities.
- **Public unawareness:** Lack of awareness about cybersecurity best practices among users and organizations exacerbates vulnerabilities.

- **Advanced Persistent Threat (APT) groups and hackers:** APT41 from China and the Lazarus Group from North Korea are significant threats to India's cybersecurity.
- **State-sponsored cyberattacks:** A 278 percent surge in state-sponsored cyber assaults against India from 2021 to September 2023.
- **Rise of ransomware attacks:** A 53 percent hike in ransomware attacks in various sectors, including critical infrastructure.
- **Data breaches:** Large-scale data breaches, such as the reported sale of personal information of over 800 million Indian citizens on the dark web.
- **Increased reliance on digital technologies:** India's growing digital footprint and adoption of new technologies like DPI, cloud computing, big data, and IoT increase vulnerabilities.

Conclusion:

The shared sovereignty of cyberspace makes it a challenging domain for nations to defend against cyber threats. It requires a comprehensive approach to cybersecurity, including technological measures, international cooperation, and awareness among individuals and organizations.

Kerala's Migration Survey

Why in News:

Kerala Migration Surveys 2023, Provides up-to-date migration estimates and socio-economic background characteristics. The survey's primary focus was on the concerns of emigrants, return emigrants, migrants to other states, and those returning from other states within India.

Key Findings of The Reports:

Slightly Reduction in Migration:

- 22 lakh people migrated from Kerala last year. This number was 21 lakh in year 2018. When this survey started in 1998, 14 lakh people had migrated from Kerala.
- In 2013, this number increased to 24 lakh. But since then it has been gradually decreasing. It is estimated that about 50 lakh Malayalam-speaking people live outside India.

People of Kerala Are Also Returning Home:

- In years 2018, 12 lakh Malayalam speakers returned to India. Whereas in 2023, this number increased to 18 lakh.
- In the last five years, the number of people from Kerala returning has increased by 38.3 percent.

The Attraction of Gulf Countries Has Fallen:

- The attraction of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE has decreased among Malayalam-speaking migrants. The preference for other countries has increased by 19.5 percent.
- In 2023, after the Gulf countries, Malayalam-speaking migrants chose Britain (6%), Canada (2.5%), America (2.2%) and Australia.

The Number of Migrant Students Increased:

- The number of students migrating is increasing. Of all the Malayalam-speakers who migrated in 2023, 11.3 percent were students.

The Number for Women :

- While the share of female migrants was 15.8 in 2018, it increased to 19.1 in 2023. Of these, 71.5 women were graduates. Whereas this figure is only 34.7 percent among men.

More Muslim Migrants:

- Among migrant Malayalam-speakers, 41.9 per cent are Muslims and 35.2 per cent are Hindus while Christians account for 22.3 per cent of the migrants.

Money Being Sent From Abroad:

- Remittances have also increased significantly. While Rs 85,092 crore was sent in 2018, Rs 2,16,893 crore was sent back in 2023.

Way Forward:

This survey issued by the Kerala government was conducted by the International Institute of Migration and Development and Gulati Institute of Finance and Taxation. It is conducted every five years.

Leader of Opposition

Why in News:

Rahul Gandhi has been elected as the Leader of Opposition, filling a post that was vacant for almost 10 years. As per the GV Mavalankar Rule, the first Lok Sabha Speaker, the Leader of Opposition must have the support of at least 10% of the total members of the Lok Sabha.

Key Points:

- The Leader of Opposition in Parliament Act, 1977, was enacted to specify the salary, allowances, and rights of the Leader of Opposition in Lok Sabha. This act was later amended to the Leader of Opposition in Parliament (Salary and Allowances) Act, 1977.
- According to this Act, the Leader of Opposition in any House of Parliament is defined as the leader of the party

in opposition to the Government with the greatest numerical strength, and is recognized as such by the Chairman of the Council of States or the Speaker of the House of the People.

- This Act provides the necessary resources to the Leader of Opposition in Lok Sabha to play an important role in Parliament.

GV Mavalankar Rule:

- Although the GV Mavalankar rule is not a statutory provision, it is applied in the Lok Sabha, Rajya Sabha, Legislative Assemblies, and other bodies. Due to this rule, the post of Leader of Opposition remained vacant in the first, second, third, sixth, seventh, and eighth Lok Sabha.
- On 8 August 2014, the Supreme Court refused to struck down the "Mavalankar's 10 percent rule" and ruled that decisions of the Speaker in the House are not subject to judicial review.
- Subsequently, the post of Leader of Opposition remained vacant in the 16th and 17th Lok Sabha as well.
- However, under statutory rules, the Leader of Opposition is included as a member of various important committees and selection committees. In situations where the post was vacant, the Central Government included the leader of the largest opposition party in these committees.

Rights of the Leader of the Opposition:

- According to the 'Leader of Opposition in Parliament (Salary and Allowances) Act, 1977', the rights and facilities of the Leader of the Opposition are exactly the same as those of a Cabinet Minister according to the 'Salary, Allowances and Pension Act of Members of Parliament, 1954'.
- The Leader of the Opposition is a member of various important committees and selection committees. These committees include those responsible for appointing the Central Vigilance Commissioner, Information Commissioner, Chairman and Members of the National Human Rights Commission and the Chief of the Central Bureau of Investigation (CBI), among others.
- The Leader of the Opposition is also a member or chairman of the Public Accounts Committee. This committee plays a crucial role in examining the financial accounts of the government, including scrutinizing the expenditure of funds allocated through Parliament.

Conclusion:

Mavalankar's rule regarding the selection of the Leader of the Opposition was not a statutory provision but rather a procedural guideline established by the Speaker of the House to facilitate its functioning. Despite the existence of statutory provisions over several decades, the selection of the Leader of the Opposition through a predetermined procedure remains a matter of concern.

Pradhan Mantri Awas Yojana

Why in News:

The Union Cabinet has approved the construction of 3 crore additional rural and urban houses under the Pradhan Mantri Awas Yojana.

About Pradhan Mantri Awas Yojana (rural):

- Pradhan Mantri Gramin Awas Yojana is a social welfare program that aims to provide housing for the rural poor in India.
- The program was launched in 1985 as Indira Awas Yojana (IAY), was renamed in 2015.
- Under the program, financial assistance of up to 1,20,000 is provided for the construction of houses in plain areas and 1,30,000 in difficult areas (high land area).
- The houses are allotted in the name of the woman or jointly between husband and wife.
- The construction of the houses is the sole responsibility of the beneficiary.
- The program also provides for the construction of toilets, LPG connection, electricity connection, and drinking water, convergence with other schemes like Swachh Bharat Abhiyan toilets, Ujjwala Yojana LPG gas connection, and Saubhagya Yojana electricity connection.
- The program has constructed over 25 million houses since its inception in 1985.

About Pradhan Mantri Awas Yojana (Urban):

- Pradhan Mantri Awas Yojana-Urban (PMAY-U) is a flagship mission of the Government of India being implemented by the Ministry of Housing and Urban Affairs (MoHUA). It was launched on June 25, 2015.
- The goal of the mission is to provide affordable housing to low and moderate-income residents in India, particularly the urban poor and slum dwellers.
- The mission aims to provide a pucca house to all eligible urban households by the year 2022.

- The scheme is being implemented through four verticals: Beneficiary Led Construction/Enhancement, Affordable Housing in Partnership, In-situ Slum Redevelopment and Credit Linked Subsidy Scheme.
- The maximum carpet area for houses constructed for the Economically Weaker Section is 30 sq. m, but states and union territories have the flexibility to increase this.
- The government has approved an investment of 43,922 crore for the construction of 6,83,724 houses under this scheme.
- An interest subsidy of 6.5% is provided by the government on housing loans availed by the beneficiaries for a period of 20 years.
- The houses under Pradhan Mantri Awas Yojana would be constructed through eco-friendly technology.

Conclusion:

The Union Cabinet's approval for the construction of three crore additional rural and urban houses under the Pradhan Mantri Awas Yojana (PMAY) is a significant decision that aligns with the government's vision of providing housing for all.

Public Examinations (Prevention of Unfair Means) Act, 2024

Why in News:

Central government has notified the Public Examinations (Prevention of Unfair Means) Act, 2024, passed in February to prevent paper leaks and cheating amid the controversies surrounding the NEET and UGC-NET exams.

The Act aims to:

- Deter cheating and paper leaks.
- Protect the integrity of public examinations.
- Ensure fairness and equity for all candidates.
- Preserve the credibility of degrees and certifications.
- Strengthen the examination system.

Key provisions of the law:

- Under the law, any person or persons found guilty of leaking a paper or tampering with answer sheets will receive a minimum jail term of three years. This can be extended to five years with a fine of up to Rs 10 lakh. All offences under the Act will be cognisable and non-bailable.
- As per the new law, examination service providers who

- have knowledge about a possible offence but do not report it can be fined up to Rs one crore.
- During the investigation, if it is established that any senior official from the service provider had allowed or was involved in committing the offence, he will face imprisonment for a minimum of three years, which can go up to 10 years, and a fine of Rs 1 crore.
- If the examination authority or the service provider commits an organised crime, the jail term will be a minimum of five years and a maximum of 10, and the fine will remain Rs 1 crore.
- Candidates taking the exam are exempt from the law's punitive provisions and will be subject to the exam board's existing unfair means regulations.
- **Unfair Means:** At least 15 actions that amount to using unfair means, including leakage of question paper, answer key, and tampering with any document necessary for short-listing of candidates.
- **Investigation and Enforcement:** Offences under the proposed law will be investigated by officers not below the rank of Deputy Superintendent of Police or Assistant Commissioner of Police.

Conclusion:

Public Examinations (Prevention of Unfair Means) Act, 2024 is a landmark legislation aimed at preventing and punishing cheating and paper leaks in public examinations in India. The Act demonstrates the government's commitment to maintaining the integrity of the examination system, promoting academic honesty, and upholding the value of education. Its effective implementation will help build trust in the examination system, safeguard the future of students, and contribute to the nation's progress.

Post Office Act

Why in News:

The Post Office Act, 2023, which was passed by the Indian Parliament and signed into law by the President, went into effect on June 18, 2024. The new law repeals the Indian Post Office Act, 1898.

Key provisions of Post Office act 2023:

- The Act allows the Centre to intercept, open, or detain any postal item and deliver it to customs authorities, in the interest of state security, friendly relations with foreign states, public order, emergency, public safety, or

contravention of other laws.

- The Act exempts the Post Office and its officers from “any liability by reason of any loss, mis-delivery, delay, or damage in the course of any service provided by the Post Office,” except such liability as may be prescribed.
- The Act removes all penalties and offenses under the 1898 Act, such as misconduct, fraud, and theft, committed by post office officials.
- The Act regulates private courier services by bringing it under its ambit.
- The Director General of Postal Services will be appointed to head India Post. He will have powers to make regulations on various matters including tariffs for services and supply of postage stamps.
- The Act does not specify any offences and penalties for the unauthorized opening of postal articles by a postal officer.
- It allows the Post Office to provide services that the Central Government may prescribe.
- It directs the Central Government to make rules to give effect to arrangements made with foreign countries or territories for postal services between India and the said country or territory.

Why was the Indian Post Office Act 1898 replaced?

- The Indian Post Office Act 1898 was enacted in 1898 with the objective of controlling the functioning of the Post Office which mainly related to the mail services provided through the Post Office.
- Presently the services through the Post Office are diversifying and the Post Office network is becoming a medium for the delivery of various types of citizen-centric services. Apart from this, the Department of Posts has also started banking services with India Post Payments Bank, due to which there was a need for a new law.

Conclusion:

Post Office Act of 2023 is a significant legislation that aims to modernize and transform the Indian postal service, India Post, into a more efficient and customer-centric organization. Overall, the Act aims to revamp the postal service to make it more efficient, customer-friendly, and competitive, while also enhancing its role in the country's financial inclusion and e-commerce ecosystem.



India's SAGAR Vision and Indo-Pacific Strategy under New Government Leadership

India has re-elected the Prime Minister under whom the country has aimed to build a robust blue water naval force in the Indian Ocean region and is actively working to institutionalize maritime domain awareness.

During his swearing-in ceremony, the Prime Minister extended invitations to neighboring countries, particularly key Indian Ocean nations such as Maldives, Sri Lanka, Bangladesh and Mauritius. This move signifies a revitalization of diplomacy related to India's Sagar Vision. It also reaffirms the justification for India's island diplomacy and extended neighborhood policy in the Indian Ocean. India has declared Mauritius as its extended neighborhood. Along with this, India also sees the Indian Ocean region as its extended neighborhood in a broad sense.

India and Nepal:

- ❖ In a gesture towards regional diplomacy, Nepal's Prime Minister Pushpa Kamal Prachanda was invited to Indian Prime Minister Narendra Modi's swearing-in ceremony. This move was seen as a step towards normalizing relations, especially given recent tensions over the Kalapani and Lipulekh border disputes, which escalated to the point where Nepal depicted these areas on its currency.
- ❖ Recently, Nepal and India held their first meeting to address money laundering, which indicates that new areas of cooperation are expanding between India and Nepal. But at the same time, the Indian government also knows that the challenges in their relations have not diminished as evidenced by recent developments.
- ❖ Nepal's Prime Minister Pushpa Kamal Dahal Prachanda, who arrived to attend the swearing-in

ceremony of Indian Prime Minister Narendra Modi, again raised controversial issues during his Delhi visit. After issuance of 100 rupee note with the controversial map of Nepal, now Prachanda has asked PM Modi and External Affairs Minister S Jaishankar to resolve the Kalapani border dispute and to take SAARC forward again. India had sidelined SAARC due to Pakistan's terrorist tactics, a move that Nepal has not appreciated. The SAARC headquarters is located in Nepal, and Pakistan is exerting pressure to revive the South Asian organization. The resolution of this issue will depend on India's diplomatic approach.

India and Maldives:

- ❖ India's invitation to Maldives President Muizzu signifies a new opportunity for Maldives to improve its strained relations with India. Simultaneously, India aims to enhance security and stability in the Indian Ocean region under its new leadership. India seeks to be perceived as a net security provider in the Indian Ocean region by countries like Maldives, a trend that is currently unfolding. India has effectively fostered trust among Indian Ocean countries during the COVID pandemic, a moral achievement that countries like China are unlikely to replicate.

India and Mauritius:

- ❖ During the visit of India's Foreign Minister to Maldives and Mauritius, India focused on addressing the needs

of both countries to strengthen their capabilities in essential economic, strategic, and defense matters. A Comprehensive Economic Cooperation and Partnership Agreement (CECPA) was signed between India and Mauritius, symbolizing India's desire to elevate bilateral economic relations with this Indian Ocean country. Such agreements often evolve into free trade agreements in the future.

- ❖ Under this agreement, both the countries will provide each other preferential access to their respective markets on surgical equipment, medicine and textile products etc. Under this, Mauritius will get preferential access for export of 40 thousand tonnes of sugar to the Indian market.
- ❖ India had also signed a Defence Line of Credit agreement of \$100 million with Mauritius. This will help Mauritius to procure defence assets and equipment from India. The move appears to be a part of India's endeavours to counter China's attempts to spread its geo-strategic tentacles in Indian Ocean region. Mauritius, which is emerging as an important maritime entity in the Indo-Pacific region, justifiably receives such support. The security and prosperity of Mauritius are directly linked to India's security and prosperity. Following this approach, India has also decided that Mauritius will receive a Dornier aircraft from India and lease an Advanced Light Helicopter Dhruv to enhance its maritime security capabilities.
- ❖ The international sea routes located in the Maldives region in the Indian Ocean supply oil from the Middle East to India, Japan and China. More than 97 percent of India's international trade in quantitative terms and more than 75 percent in value terms takes place through the international trade shipping lanes of Maldives situated in the Indian Ocean. Maldives is very important for India for the development of blue economy or ocean economy. It is also important for the security of the coastal areas of Andaman Nicobar Islands, Lakshadweep.

Emphasis on the right to self-determination in the Indian Ocean:

- ❖ India and Mauritius have discussed the strategically important Chagos Island dispute, which the United Nations views as an issue of island sovereignty and sustainable development. In the year 2019, India voted in favor of a resolution in the United Nations General Assembly recognizing the ownership of Mauritius instead of Britain over the Chagos Islands. India was among the 116 countries that demanded that

Britain end its colonial administration on this island of Mauritius. Since India recognizes the right to self-determination of the countries of the Indian Ocean including third world countries under its foreign policy, in recent times it has worked giving top priority to the issue of security, sovereignty, development of the island countries of the Indian Ocean under its island diplomacy.

- ❖ India has made it clear that India will continue to give strong ideological support to Mauritius on the issue of Chagos Islands. Mauritius says that Chagos Island has been part of it since the 18th century and it remained so until Britain took control of Chagos from its colony in 1965. Three years before Mauritius got independence from Britain, Britain played with the territorial integrity of Mauritius by leasing the strategic site of Diego Garcia of Chagos Island to America to open its military base. Not only this, Britain created British Indian Ocean Territory by taking Aldabra, Farquhar and Desroches islands from Seychelles. When Seychelles got independence from Britain in June 1976, Britain handed back these islands to Seychelles.

Sagar Vision and Sagar Mission in Indian Ocean:

- ❖ In May 2020, India launched Mission Sagar to enhance its medical diplomacy in the Indian Ocean region, providing COVID-19 assistance to neighboring countries. As part of this mission, INS Kesari visited Maldives, Mauritius, Madagascar, Comoros, and Seychelles, helping protect these maritime neighbors from the pandemic under the extended neighborhood concept. Travelling 7,500 nautical miles over 55 days, INS Kesari gave shape to Mission Sagar, realizing India's Sagar Vision.
- ❖ India supplied essential food items, medicines, Ayurvedic medicines to Mauritius and Comoros Islands for humanitarian assistance and also sent medical assistance teams to both these countries. Mission Sagar is the concrete form of the Sagar Vision adopted by Prime Minister of India Modi in 2014. SAGAR Vision means Security and Growth for All in the Indian Ocean Region.

India sharpening the Indo-Pacific strategy:

- ❖ In 2018, at the Shangri-La Dialogue in Singapore, the Indian Prime Minister clarified the concept of the Indo-Pacific, stating it includes the entire Indian Ocean to the Western Pacific Ocean. From the Indian perspective, it encompasses the regions of Africa, America, and Japan. India's Indo-Pacific strategy, while including these geographical dimensions also considers ASEAN

centrality as the pillar of this strategy. Inclusiveness and openness are essential parts of India's policy.

- ❖ To protect its interests in the Indo-Pacific region, India's Act East Policy is evolving into the Act Indo-Pacific Policy. India is counterbalancing China by aligning with South Asian, Southeast Asian and East Asian countries. It has successfully integrated nations like the United States, Japan, and Australia into its Indo-Pacific security strategy. Moreover, the Free and Open Indo-Pacific strategy is gaining recognition among European countries.
- ❖ In 2018, France outlined its Indo-Pacific strategy. Due to the US Indo-Pacific Strategy and its alliance with the QUAD security group, India, under the leadership of its Prime Minister, is making ocean sovereignty a global issue. Consequently Germany too has formulated a new Indo-Pacific policy to strengthen partnerships with democratic countries in the region, which has been supported by India, Japan, and ASEAN countries.
- ❖ India has given a new dimension to the security of seas and oceans in global and regional politics. By advocating for freedom of navigation in the Indian and

Pacific Oceans and unhindered movement through crucial commercial sea routes, India has initiated a global movement supported by ASEAN, East Asian, and African countries, including the US, Japan, and Australia. This led to the launch of the Act East Policy in 2015 by the Indian Prime Minister, aiming to promote peace, stability, and prosperity in the Asia-Pacific region. In this policy, India emphasized cooperation and coordination not only with Southeast Asian countries but also with other Asia-Pacific nations.

- ❖ Additionally, recognizing Japan as indispensable, India and Japan announced the "Japan-India Vision 2025 Special Strategic and Global Partnership" in 2015, aiming to promote peace and prosperity in the Indo-Pacific region and the world. Recently, Canada has indicated plans to formulate its Indo-Pacific policy with Japan, emphasizing the need for a free and open Indo-Pacific region. Britain has also shown interest in the Indo-Pacific strategy. Consequently, many European countries are mobilizing to counter China's encroachment on global laws in the Indo-Pacific.

Short Issues

Japan's Consolidating Security Stance

Why in News:

India and Japan have recently held extensive deliberations on the threats of terrorism including state-sponsored cross-border terrorist activities in South Asia and ways to unitedly combat the challenge.

Highlights of the meeting:

- Both sides exchanged views on the terrorist threats in their respective regions, including State-sponsored cross-border terrorism in South Asia, South East Asia, East Asia, Middle East, as well as terror activities in the Af-Pak region.
- The two sides assessed counter terrorism challenges, including the use of new and emerging technologies by terrorists, misuse of internet for terrorist purposes, radicalisation and terror financing. Countering terror financing, organised crime and narco-terror network

also featured in the discussions.

- Both sides emphasized the importance of strengthening counter-terrorism cooperation through exchange of information, capacity building, training programmes & exercises, and cooperation at the multilateral fora, such as the UN, FATF and QUAD.
- The two sides agreed to hold the 7th Meeting of Joint working group on counter terrorism in Tokyo on a mutually-convenient date.

Japan on counter-terrorism:

- Japan is committed to addressing threats in collaboration with the international community. It actively participates in discussions through important forums like FATF to create international standards.
- Japan supports African-led efforts under the New Approach for Peace and Stability in Africa (NAPSA), launched at the 7th Tokyo International Conference on African Development (TICAD 7). This includes strengthening local administration capacities in the G5

Sahel and neighboring countries.

- One crucial element of the "Japan and India Vision 2025" is the alignment between India's 'Act East' policy and Japan's 'Partnership for Quality Infrastructure,' aiming to boost connectivity in the region through quality infrastructure. During his visit to India in March 2022, Japanese Prime Minister Kishida announced a 5 trillion Yen (around \$37 billion) investment goal in India for the next five years.

Post war Pacifism of Japan:

- After World War II, Japan embraced the policy of pacifism. It refrained from significant military build-up, limited defense spending, and avoided military involvement in conflicts. This pacifism stemmed from Japan's desire to atone for its militaristic and imperialistic actions in the pre-war years.
- To compensate for its pacifist stance, Japan formed a bilateral military alliance with the United States. Under the protection of the US in Asia, Japan could concentrate on rebuilding its economy.
- By the late 1960s, Japan had emerged as a commercial and technological powerhouse. By the early 1970s, it had become the world's second-largest economy, trailing only the US.
- Several factors have contributed to Japan's reorientation in the 21st century.

On the external front, four elements have come together:

- The rise of China and its military assertion, especially on the territorial disputes with Japan;
- Against the backdrop of China's increasing military activities in the Indo-Pacific, India and Japan have reaffirmed their strong commitment to a free, open, inclusive, and resilient Indo-Pacific region. Japan's Free and Open Indo-Pacific (FOIP) strategy and India's Indo-Pacific Oceans Initiative (IPOI) serve as frameworks for deepening their strategic partnership and cooperation in the region.
- The deepening military bonds between Beijing and Moscow and the coordination of their policies in North East Asia.
- The growing military capabilities of North Korea; and the fears triggered that the US could withdraw its security protection to Japan and other Asian allies.
- The conservatives in Tokyo advocate for Japan to become a 'normal power.' They argue that Japan has sufficiently demonstrated its credentials as a responsible global citizen and should now take responsibility for its own security and contribute to regional order.

Major steps by Japan to become a geopolitical power:

- **Increased defense expenditure:** Japan has removed its historical cap on defense spending, previously unofficially set at 1% of GDP. World Bank data shows that in 2020, Japan's military expenditure reached 1% of GDP for the first time in six decades, rising to 1.1% in 2022.
 - » The Kishida government has pledged to double annual defense spending to approximately 10 trillion yen (\$68 billion) by 2027, potentially making Japan the world's third-largest military spender after the US and China.
- **Increased counter strike capability:** Japan has acquired and is further developing its own counter-strike capability through cruise missiles. A recent deal with the US allows Japan to purchase up to 400 Tomahawk cruise missiles, capable of striking deep into China and North Korea.

Ease on export ban of lethal weapons:

- Japan's cabinet eased its self-imposed ban on exports of lethal weapons to friendly countries.
- Japan approved the shipment of Japanese-made Patriot missiles to the US.
- It is spearheading the Global Combat Air Programme with the UK and Italy to develop the BAE Systems Tempest, a proposed sixth-generation stealth fighter.
- During Kishida's visit, Japan and the US finalized the creation of a joint military-industrial council to facilitate the co-production of weapons.

Conclusion:

India's bilateral relationship with Japan has acquired a political character over the last two decades. A politically resolute and militarily strong Japan that can build a stable Asian equilibrium is a positive development from the Indian perspective. It contributes to India's objective of building a multipolar Asia in a multipolar world.

Biopharmaceutical Alliance

Why in News:

South Korea, India, United States, Japan and the European Union have recently come together to launch an alliance to put joint efforts into building a resilient supply chain in the biopharmaceutical sector.

More about the News:

- The alliance was launched in response to the drug

supply shortages experienced during the Covid-19 pandemic. The participants emphasized the importance of a reliable and sustainable supply chain and agreed to coordinate their respective countries' biopolicies, regulations and research and development support measures.

- They acknowledged that essential raw materials and ingredients production is concentrated in a few countries and agreed to collaborate on creating a detailed pharmaceutical supply chain map. The alliance was inaugurated in San Diego during the Bio International Convention 2024.

-: Prelims Insights :-

About Bio International Convention 2024:

- The Bio International Convention is the leading event for the biotechnology industry, gathering over 20,000 leaders globally. It encompasses the entire biotech ecosystem, including public pharmaceutical companies, biotech startups, academia, non-profits and government agencies.

What are Biopharmaceuticals?

- Biopharmaceuticals are medical drugs created using biotechnology. These include proteins (such as antibodies) and nucleic acids (DNA, RNA, or antisense oligonucleotides) used for therapeutic or in vivo diagnostic purposes.
- They are produced through methods other than direct extraction from a native, non-engineered biological source. The first biopharmaceutical approved for therapeutic use was recombinant human insulin, developed by Genentech and marketed by Eli Lilly in 1982.

Pharmaceutical industry in India:

- India ranks third worldwide as a producer of drugs and pharmaceuticals by volume, exporting to around 200 countries/territories.
- The Indian pharmaceutical industry supplies 62% of the global demand for vaccines and is a leading supplier of DPT (diphtheria, pertussis and tetanus), BCG (Bacillus Calmette-Guérin, used primarily against tuberculosis), and measles vaccines.
- At least 70% of WHO's vaccines (as per the essential immunisation schedule) are sourced from India.

Conclusion:

India has earned the title "Pharmacy of the World" due to its robust generic pharmaceutical industry, which supplies affordable and quality medicines globally. This reputation was significantly bolstered during the HIV/AIDS pandemic when Indian companies provided affordable antiretroviral drugs to African countries. This contribution not only highlighted India's capacity to produce essential medicines at a lower cost but also underscored its commitment to global health. The alliance too will become a crucial player in addressing global healthcare challenges, further solidifying its standing on the world stage.

Landslides in Papua New Guinea and India's Assistance

Why in News:

The Government of India has granted \$1 million as immediate assistance for Papua New Guinea, which has been hit by a devastating flood and landslide that has so far killed 2,000 people.

More about the News:

- In Yambali, a village in Papua New Guinea with nearly 4,000 residents, a landslide has devastated the community.
- Located 600 kilometers (370 miles) northwest of the capital, Port Moresby, the landslide has destroyed all food gardens crucial for the village's subsistence farming and buried the three streams that provide drinking water.
- The situation is worsened by Papua New Guinea's challenging geography, with few accessible roads outside major cities, hindering access to remote areas.
- Emergency responders are encountering difficulties using heavy machinery for excavation due to the risks and cultural sensitivities related to potentially disturbing bodies in the rubble.

About Papua New Guinea:

- Papua New Guinea is an island nation located in the southwestern Pacific Ocean, comprising the eastern portion of the island of New Guinea (the world's second largest island).
- The western half of the island is part of the Indonesian provinces of Papua and West Papua. Its neighbors include Indonesia to the west, Australia to the south and the Solomon Islands to the south-east.
- The islands that constitute Papua New Guinea were settled over a period of 40,000 years by a mixture of

- peoples who are generally referred to as Melanesians.
- Papua New Guinea is a member of Forum for India-Pacific Islands Cooperation (FIPIC). India has been promoting cooperation with the Pacific island nations through FIPIC.

-: Prelims Insights :-

Forum for India-Pacific Islands Cooperation (FIPIC):

- FIPIC is a platform launched in 2014 to strengthen India's ties with 14 Pacific Island Countries (PICs)- Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu (all located in the Pacific Ocean, to the northeast of Australia).



About landslides in India:

- India is considered one of the top five landslide-prone countries globally, with at least one death per 100 sq km reported annually due to landslides.
- Rainfall variability is the primary cause of landslides in the country, with the Himalayas and the Western Ghats being particularly vulnerable. Excluding snow-covered areas, approximately 12.6% of India's geographical land area (0.42 million sq km) is prone to landslides.
- The North-western Himalayas account for 66.5% of landslides, the North-eastern Himalayas for 18.8%, and the Western Ghats for 14.7%.

Conclusion:

India has consistently supported Papua New Guinea during challenging times, such as after the 2018 earthquake and the volcanic eruptions in 2019 and 2023. An essential component of India's Indo-Pacific Oceans' Initiative (IPOI), introduced by Prime Minister of India in November 2019,

is Disaster Risk Reduction and Management. India remains dedicated to Humanitarian Assistance and Disaster Relief (HADR), maintaining its role as a reliable and unwavering responder.

BRICS Foreign Minister Meeting

Why in News:

The foreign ministers of BRICS nations met in Nizhny Novgorod, Russia on June 10. It was the first ministerial meeting following BRICS expansion in 2023 when Egypt, Ethiopia, Iran, and the UAE joined BRICS as full-fledged members.

Highlights of the meeting:

- The BRICS foreign ministers met to discuss trade in local currencies among the expanded grouping.
 - The ministers called for a comprehensive reform of the global financial architecture.
 - They urged for the successful completion of the 2025 International Bank for Reconstruction and Development shareholder review.
 - The ministers supported a robust Global Financial Safety Net with a strong, quota-based and adequately resourced International Monetary Fund (IMF) at its center.
 - They pushed for the continued process of IMF governance reform, including creating a new quota formula reflecting the economic size of its membership.
 - The ministers emphasized the need for reforming the policies and practices of multilateral development banks (MDBs) in order to increase their lending capacities.
 - They encouraged the New Development Bank to follow the member-led and demand-driven principle, employ innovative financing mechanisms to mobilize financing from diversified sources, enhance capacity building and knowledge exchange.
 - The ministers agreed to develop the New Development Bank into a new type of Multilateral Development Bank of the 21st century.
 - They expressed the intention to promote energy cooperation among the BRICS countries and urged for resilient global supply chains to ensure universal access to affordable, accessible, reliable, sustainable, and modern energy.
- #### **About BRICS:**
- The acronym BRIC, which did not initially include South Africa, was coined in 2001 by then Goldman

Sachs chief economist Jim O'Neill in a research paper that underlined the growth potential of Brazil, Russia, India and China.

- The bloc was founded as an informal club in 2009 to provide a platform for its members to challenge a world order dominated by the United States and its Western allies.
- Its creation was initiated by Russia.
- The group is not a formal multilateral organisation like the United Nations, World Bank or the Organisation of the Petroleum Exporting Countries (OPEC).
- The heads of state and government of the member nations convene annually with each nation taking up a one-year rotating chairmanship of the group.

Members of BRICS:

- Brazil
- Russia
- India
- China
- South Africa
- Iran (joined on January 1, 2024)
- Egypt (joined on January 1, 2024)
- Ethiopia (joined on January 1, 2024)
- The United Arab Emirates (joined on January 1, 2024)

Conclusion:

BRICS Foreign Ministers sought to strengthen their economic cooperation, reform global financial governance, and enhance the capacity of international financial institutions to support development and stability.

Workers Under The Kafala System

Why in News:

Recently tragic fire in Mangaf in Kuwait, Which claimed the lives of 49 migrant workers has once again highlighted the systemic issues and exploitation inherent to the Kafala system.

About Kafala System:

- The kafala, or sponsorship, system defines the relationship between foreign workers and their local sponsor, or kafeel, which is usually their employer. It has been used in Gulf countries Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates as well as Jordan and Lebanon.
- Under this system, the state gives local individuals or companies sponsorship permits to employ foreign labourers (except in Bahrain, where workers are

sponsored by a government agency rather than individual employers).

- The sponsor covers travel expenses and provides housing, often in dorm like accommodations or, in the case of domestic workers, the sponsor's home.
- Rather than hiring an individual directly, sponsors sometimes use private recruitment agencies in the countries of origin to find workers and facilitate their entry to the host country.
- The system usually falls under the jurisdiction of interior ministries, rather than labour ministries, so workers often have no protection under the host country's labour law.



Abuses Faced by Workers Under the Kafala System:

- **Restricted Movement and Communications:** Employers regularly confiscate passports, visas, and phones, and confine domestic workers to their homes.
- **Debt Bondage:** Although most host countries require employers to pay recruitment fees, these often get passed on to workers, who take out loans to pay them or become indebted to the recruiter.
- **Visa Trading:** Sponsors sometimes illegally sell a worker's visa to another employer while remaining the official sponsor.

Benefits from the Kafala System:

World Responds to the Kafala system:

- Labor rights advocates have long called for the system to be reformed or abolished, demands that received greater attention in light of worldwide anti-racism protests in 2020.
- The 2022 FIFA World Cup has also thrown a light on abuses by host country Qatar, where migrant workers labored in temperatures above 100°F (38°C) to construct roads, hotels, and stadiums for the tournament.

Way Forward:

Multinational organizations including the European Union

and the United Nations have also criticized the kafala system, though none has taken concrete measures against it.

ZiG: Zimbabwe's New Gold Currency

Why in News:

Zimbabwe rolled out a new gold-backed currency called the ZiG, or Zimbabwe Gold, in an effort to mitigate the currency instability and hyperinflation that has plagued the country for decades.

Genesis of the Crisis:

- In 2008, hyperinflation peaked at staggering levels, causing the Zimbabwe dollar to lose its value and the government to abandon it in 2009.
- Since then the US dollar and other foreign currencies have been widely-used throughout the economy.
- With inflation rates exceeding 500% in recent years. In March 2024, the annual rate of price increases at 55.3%, a seven-month high.
- Many Zimbabweans prefer to avail the safety of the US dollar, which accounts for around 85% of transactions.

Effects of The New Currency:

- The ZiG stands out as a new currency backed by gold, aims to provide stability and prevent currency devaluation.
- Zimbabwe has imposed fines for not doing transactions at the official exchange rate of the ZiG.
- The ZiG signifies Zimbabwe's shift away from past economic challenges towards a more secure monetary future by establishing a stable foundation to control inflation, stimulate economic growth, and restore public trust in Zimbabwe's financial system after years of currency instability.
- There are efforts underway to improve payment systems for local currencies across Africa. For example, the Pan-African Payment and Settlement System (PAPSS).

Way Forward:

Zimbabwe's currency woes and its sixth attempt to establish a stable local currency in 15 years, have undermined President Emmerson Mnangagwa's efforts to win back foreign investors who were sidelined under his ousted predecessor Robert Mugabe.

G7 Summit

Why in News:

The 50th G7 summit held in Italy. India has attended the G7 summit as an outreach country, marking its 11th participation, with Prime Minister Modi attended the summit for the fifth consecutive time.

Highlights of the 50th G7 Summit:

- **Ukraine Support:** G7 countries reaffirmed their support for Ukraine, with a new financing plan worth \$50 billion.
- **Economic Security:** G7 addressed economic security, non-market policies, and supply chain resilience.
- **Climate and Energy:** G7 accelerated climate action, set a target for 1,500 GW of long-duration energy storage, and recognized nuclear energy as a clean energy source.
- **AI Governance:** G7 leaders committed to enhance interoperability among their AI governance approaches.
- **Global Infrastructure:** G7 promoted the Partnership for Global Infrastructure and Investment (PGII) to narrow the \$40 trillion infrastructure gap.
- **Regional Support:** Support was extended for various regional projects, including the Lobito Corridor, Luzon Corridor, and the Middle Corridor.
- **Food Security:** The Apulia Food Security Initiative was launched to address structural barriers to food security.
- **Health:** G7 committed to support the Pandemic Fund and Gavi, the Vaccine Alliance, to boost immunization coverage.

About Lobito Corridor, Luzon Corridor, and the Middle Corridor:

- **Lobito Corridor:** This corridor is a railway project that connects the Angolan port of Lobito to the city of Kolwezi in the Democratic Republic of the Congo. This project can help provide access to critical minerals for the U.S. and European markets.
- **India-Middle East-Europe Economic Corridor:** This corridor is a connectivity project that seeks to develop infrastructure ports, railways, roads, sea lines and pipelines to improve trade among India, the Arabian Peninsula, the Mediterranean region and Europe. This project also aims to open greater access to the African continent.
- The Luzon Economic Corridor is a project announced during the first U.S.-Japan-Philippines trilateral summit on April 11, 2024. It is a connectivity project

that will support connectivity between Subic Bay, Clark, Manila and Batangas in the Philippines

About Partnership for Global Infrastructure and Investment:

- The Partnership for Global Infrastructure and Investment (PGII) is a G7 initiative that aims to provide infrastructure development in low- and middle-income countries by mobilizing funds from the private sector.

About G7:

- The G7 was founded in 1975 as the Group of Six (G6) by France, Italy, Japan, the United Kingdom, the United States and West Germany. Canada joined the following year. Russia joined the group in 1998, which caused the name to be changed to the Group of Eight (G8). However, Russia was removed from the group in 2014 after their annexation of Crimea, and the group reverted back to being called the G7.

Conclusion:

By Collaborating with India, the G7 can leverage its strengths in areas like technology, innovation, and entrepreneurship, while also promoting democratic values, human rights, and rule-based international order. As the global landscape continues to evolve, the partnership between the G7 and India will be crucial in shaping the future of international cooperation and addressing common global challenges.

SIPRI Report on Nuclear Arsenals

Why in News:

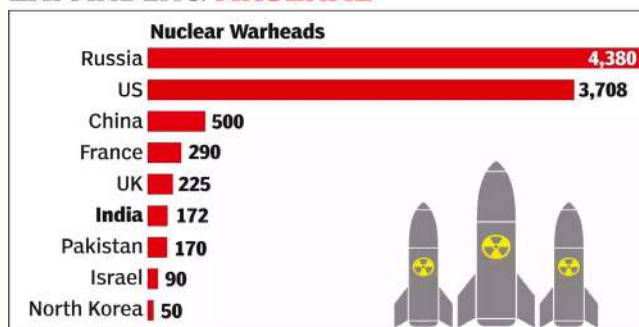
Stockholm International Peace Research Institute (SIPRI) has released its report on nuclear arsenals which highlighted the growing trends of nuclear arsenal possession by some countries.

Highlights of the report:

- China has increased its nuclear arsenal from 410 warheads in January 2023 to 500 warheads in January 2024.
- India has expanded its nuclear arsenal from 164 warheads in January 2023 to 172 warheads in January 2024.
- India is now ahead of Pakistan in terms of nuclear weapons, but India's nuclear arsenal is still smaller than China's.
- Pakistan's nuclear arsenal has remained at 170 warheads since January 2023.

- Russia and the United States combined possess nearly 90% of the world's nuclear weapons.
- France, the UK, and North Korea are also modernizing their nuclear arsenals.
- China may be deploying warheads on missiles during peacetime for the first time.
- The modernization and expansion of nuclear arsenals have raised concerns about the decline of transparency and dialogue regarding nuclear forces, particularly between Russia and the United States.

EXPANDING ARSENAL



Importance of the report:

- **Transparency:** SIPRI provides accurate and reliable data on nuclear weapons, promoting transparency and accountability among nuclear-weapon states.
- **Global security:** The report informs policymakers, researchers, and the public about the current state of nuclear arsenals, helping to assess global security risks and threats.
- **Disarmament efforts:** SIPRI's data and analysis support international efforts to reduce and eliminate nuclear weapons, promoting disarmament and non-proliferation.
- **Arms control negotiations:** The report provides crucial information for arms control negotiations, helping states to make informed decisions about nuclear reductions and limitations.

About SIPRI:

- SIPRI (Stockholm International Peace Research Institute) is an independent international research institute that focuses on conflict, armaments, arms control, and disarmament.

Key facts about SIPRI:

- Established in 1966 in Stockholm, Sweden. Conducts research and analysis on global security issues.
- Provides data and insights on military expenditures,

arms transfers, and nuclear weapons.

- Publishes annual reports, including the SIPRI Yearbook and SIPRI Fact Sheets. Offers policy analysis and recommendations on disarmament and arms control.
- Collaborates with governments, international organizations, and civil society.
- SIPRI is widely recognized as a leading authority on international security and disarmament issues, and its research and data are used by governments, scholars, and media around the world.

Conclusion:

SIPRI report on nuclear arsenals plays a vital role in promoting a safer and more secure world by providing essential information, analysis, and insights on nuclear weapons issues.

Investments Treaty between India and Cambodia

Why in News:

India hosted the second meeting of the India-Cambodia Joint Working Group on Trade and Investment (JWGTTI). India and Cambodia have discussed investment treaty, collaboration in UPI and traditional medicine.

Highlights of Investments Treaty:

- India and Cambodia are negotiating a collaboration on UPI based digital payments to boost trade and tourism.
- Discussion have also been made towards diversifying the trade basket, a bilateral investment treaty, and cooperation in the pharma sector.
- The meeting aimed to deepen bilateral trade and investment, with bilateral trade already increasing to \$403.78 million in 2023-24 from \$366.44 million in 2022-23.
- India and Cambodia had a bilateral trade of \$403.8 million in FY24, 2.9-times higher compared with FY17.
- The trade between the countries has grown 10.2 percent in FY24 compared with the previous year, on account of a 50 percent jump in imports from Cambodia.

India-Cambodia Relations:

- Amid the world's current geopolitical flux, exacerbated by the Russian invasion of Ukraine and the US-China rivalry, states find it difficult to create strategic space for themselves. However, India and Cambodia are working within these constraints and operationalizing independent strategies, particularly by strengthening

bilateral relations.

- This diversification strategy is an attempt to maneuver as geopolitical tensions rise. This relationship is based on converging interests to strengthen bilateral ties and extend cooperation in Southeast Asia, ensuring stability and security.
- India had invited Cambodia to the Voice of Global South summit, exhibiting a commitment to South-South cooperation. This showed New Delhi's inclusive approach emphasizing multilateralism on issues of interest for developing countries, especially after the COVID-19 pandemic.
- Both countries' independent foreign policies go against what many see as a necessary choice between the United States and China. Even as a member of the Quadrilateral Security Dialogue (QUAD), India has not shied away from pursuing relations with Russia, supporting BRICS expansion, and maintaining membership in the Shanghai Cooperation Organization, against the United States' preference.

Way Forward:

In this situation, advancing bilateral ties with India seems appropriate in terms of its geopolitical and strategic needs. New Delhi's determination to adhere to a rules-based order and autonomy places Cambodia at a better junction to navigate its path vis-a-vis China.

India-Italy Strategic Partnership at G7 Summit

Why in News:

Prime Minister Narendra Modi went to Apulia in southern Italy to attend the outreach session of the 50th G7 summit. During his one-day visit, he attended the sessions on Artificial Intelligence, Energy, Africa-Mediterranean Summit hosted by Italian Prime Minister Giorgia Meloni and discuss India-Italy strategic partnership.

Review of the Progress made in India-Italy Strategic Partnership:

- Both the leaders committed to fulfil their shared vision for a free and open Indo-Pacific and also discussed the India-Middle East-Europe Economic Corridor.
- Amid China's aggressive actions in the Indo-Pacific Ocean region, the two leaders looked forward to joint activities to be implemented under the Indo-Pacific Ocean Initiative framework to realize their shared vision of a free and open ocean.
- While expressing happiness at growing trade and

economic collaboration, they called for expanding commercial ties in clean energy, manufacturing, Space, S&T (science and tech), telecom, AI and critical minerals to build resilient supply chains.

- They welcomed the recent signing of a MoU on Industrial Property Rights (IPR) which provides a framework for cooperation on patents, designs and trademarks.

Key Highlights of G7 Outreach Session:

- With a focus on AI and energy, Modi emphasised India's four key principles for energy availability, accessibility, affordability, and acceptability.
- PM Modi said that the global community should work to make advanced technology widely available. This will help create an inclusive society and reduce social inequalities.
- India has considered it its responsibility to place the priorities and concerns of the countries of the Global South on the world stage. We have given high priority to Africa in these efforts.
- India is the first country to meet all its COP commitments ahead of time and is working hard to reach "Net Zero" by 2070. India has also started "Mission LiFE and launched the "Ek Ped Maa Ke Naam".

Way Forward:

The strategic partnership between India and Italy at the G7 summit was marked by a commitment to deepen ties in various fields. The summit reinforced their shared values and common goals, paving the way for stronger bilateral relations.

India-US Initiative on Critical and Emerging Technology

Why in News:

India and the United States recently had their second meeting of the India-US Initiative on Critical and Emerging Technology (iCET) in New Delhi.

Highlights of the Meeting:

- Both sides emphasized their commitment to staying at the forefront of innovation and coordinating with like-minded nations to provide secure, reliable, and cost-effective technology solutions for the people of India, the U.S., and their global partners.
- They highlighted the importance of adapting technology protection measures to prevent the leakage

of sensitive and dual-use technologies to countries of concern.

- Both parties also committed to taking concrete actions in the coming months to address long-standing barriers to bilateral strategic trade, technology, and industrial cooperation, including in the commercial and civil space sectors.

-: Prelims Insights :-

MQ-9B:

- The MQ-9B Predator drone, an unmanned aerial vehicle, includes the maritime-focused MQ-9B SeaGuardian variant of the SkyGuardian RPAS. Known for their endurance, these High Altitude Long Endurance (HALE) drones can fly continuously for over 40 hours using satellite connectivity.
- India plans to acquire a total of 31 MQ-9B Predator drones: 15 SeaGuardian drones for the Navy and eight each of the land-based SkyGuardian version for the Army and the Indian Air Force.

Key Areas of discussion in India-US Strategic Cooperation:

- Deepening Defence Innovation and Industrial Cooperation: The discussions included India's planned acquisition of the "MQ-9B platforms, the possible co-production of land warfare systems, and progress on other co-production initiatives" like the GE Aerospace-HAL project of engines to power India's fighter fleet.
- Securing Semiconductor Supply Chains: The countries discussed a strategic partnership to jointly develop semiconductor design and manufacturing capabilities for precision-guided ammunition and other national security-focused electronic platforms. They also aimed to partner with industry groups to identify 'near term opportunities' and foster long-term development of complementary semiconductor ecosystems.

Civilian and Defense Space Technology Cooperation included:

- Securing a carrier for the first-joint effort between NASA and ISRO astronauts at the International Space Station.
- Strategic Framework for Human Spaceflight

Cooperation to deepen interoperability in space.

- Preparation for the launch of the NASA-ISRO Synthetic Aperture Radar, a jointly developed satellite that will map the entirety of the Earth's surface twice every 12 days.
- Strengthen defence space cooperation through the second Advanced Domains Defense Dialogue held at Pentagon in May 2024, which featured an India-US space table-top exercise and included bilateral expert exchanges on emerging domains including artificial intelligence.

Clean Energy and a Critical Minerals Partnership:

- Promoting India's "vital role" in the Mineral Security Partnership, "including through co-investing in a lithium resource project in South America and a rare earths deposit in Africa".
- "India-U.S. Advanced Materials R&D Forum" to expand collaboration between American and Indian universities, national laboratories, and private sector researchers.

Conclusion:

Sullivan's visit to India coincides with a period of challenges in India-US relations, notably concerning an alleged assassination plot involving Khalistani separatist figure Gurpatwant Singh Pannun. The situation escalated when Nikhil Gupta, one of the accused in the plot, was extradited from the Czech Republic to the US on June 14, just days before the NSA's visit.

India-Qatar Investment and Trade Relations

Why in News:

India Qatar have recently held the inaugural meeting of the Joint Task Force on Investment (JTFI) in New Delhi. The meeting aimed to strengthen bilateral relations and explore avenues for accelerated growth and collaboration across sectors such as infrastructure, energy, technology, and innovation.

Joint working group on Investments:

- The inaugural meeting of the joint working group on investment between Qatar and India was co-chaired by H.E. Mohammed bin Hassan Al Maliki, Undersecretary of Qatar's Ministry of Commerce and Industry, and H.E. Ajay Seth, Undersecretary of India's Department of Economic Affairs, Ministry of Finance.
- H.E. Al Maliki noted that trade between Qatar and

India reached around \$13.46 billion in 2023, making India Qatar's second-largest trading partner. He highlighted the active role of Qatari corporations and the private sector in the Indian market and emphasized economic diversification as a key pillar of Qatar National Vision 2030.

- Qatar's third national development strategy identifies several promising sectors for partnership and investment, including industry, logistics services, information technology, digital and financial services, health services, and education. Al Maliki expressed confidence that the joint efforts of both countries would lead to greater success, prosperity, and increased mutual investments.

India and Qatar Relations:

- **Trade Activities:** Qatar mainly exports LNG, LPG, chemicals, petrochemicals, plastics, and aluminum articles to India. India's main exports to Qatar include cereals, copper, iron and steel articles, vegetables, fruits, spices, processed food, electrical machinery, plastic products, construction material, textiles, garments, chemicals, precious stones, and rubber.
- In 2022-23, bilateral trade between India and Qatar was US\$18.77 billion. India exported goods worth US\$1.96 billion to Qatar and imported goods worth US\$16.8 billion from Qatar.
- India is one of Qatar's top three export destinations, alongside China and Japan, and is also one of its top three import sources.
- **Bilateral agreements:** India and Qatar have a strong economic relationship, with Qatar supplying most of India's LNG imports.
- In early 2024, India's Petronet LNG signed a 20-year contract to purchase 7.5 million tons of LNG annually from Qatar, extending a deal from 1999 that covers supplies upto July 2028.
- In 2023, India and the Gulf Cooperation Council (GCC), which includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE, resumed talks for a free trade agreement (FTA).
- This FTA is expected to create new business opportunities. India has already signed a bilateral FTA with the UAE, leading to a significant increase in trade since 2022.

New Investment Opportunities:

- The joint working group aims to boost investment relations by creating a strategic roadmap. This includes building a long-term investment partnership, directing financial resources to priority sectors, enhancing

cooperation between startup ecosystems, supporting innovators, and guiding companies to take advantage of opportunities like “Made in India” and “Made in Qatar.”

- The group also plans to explore new investment sectors and simplify investment procedures to boost investor confidence.
- In February 2024, Sheikh Mansoor Bin Khalifa Al Thani, a member of the Qatari royal family and chairman of a financial services firm, announced plans to explore investment opportunities in India's education, startup, and agriculture sectors.

Conclusion:

The joint investment task force between India and Qatar could significantly boost India's growing sectors like agriculture, startups, education, and renewable energy. Leaders from both countries have discussed key investment areas and are exploring strategic partnerships. Additionally, the \$6.45 billion increase in bilateral trade from 2018-19 to 2022-23 might encourage other Middle Eastern countries to strengthen their investment and trade ties with India.

India-Bangladesh Relation

Why in News:

Recently, Bangladesh Prime Minister visited India. She received ceremonial welcome at Rashtrapati Bhavan. The two sides signed 10 agreements providing for bolstering ties in a range of critical areas such as digital domain, maritime sphere, blue economy, railways, space, green technology, health and medicine.

About the agreement:

The recent pact between India and Bangladesh has led to a strengthening of relations between the two countries, with a focus on key areas such as-

- **Comprehensive Economic Partnership Agreement (CEPA):** To enhance economic interactions and promote investment.
- **Maritime Cooperation and the Blue Economy:** To harness marine resources, improve maritime connectivity, and promote economic growth.
- **Defense and Security Collaboration:** To enhance defense production, modernize armed forces, and ensure regional security and stability.
- **Digital and Green Partnerships:** To promote sustainable development practices, focusing on renewable energy and environmental conservation.
- **Railway Connectivity:** To facilitate the transit of

goods and passengers, stimulating economic activities.

- **Healthcare Initiatives and E-Medical Visas:** To provide medical treatment in India and strengthen people-to-people ties.
- **Hydrological Cooperation on Shared Rivers:** To manage shared water resources and address common hydrological challenges.

About India Bangladesh relationship:

- **Recognition:** India was the first country to recognize Bangladesh as an independent state in December 1971.
- **Historical ties:** India supported Bangladesh's fight for independence from Pakistan in 1971.
- **Economic cooperation:** Bangladesh is India's largest trade partner in South Asia, with bilateral trade reaching USD 18 billion.
- **Strategic partnership:** India and Bangladesh are close strategic partners in counter-terrorism.
- **Shared cultural ties:** Bangladesh and the east Indian states of West Bengal and Tripura share Bengali-speaking cultural ties.
- **Border management:** India and Bangladesh share a 4,096.7 km border, with ongoing efforts to resolve border disputes.
- **Water resources:** India and Bangladesh have agreements on sharing water resources, including the Ganges Water Sharing Treaty.
- **Security:** Bangladesh plays a significant role in India's Neighbourhood First policy, and India is influential in Bangladesh's security.
- **Environmental cooperation:** India and Bangladesh are working together on environmental issues like climate change and cyber security.

Differences:

- India and Bangladesh have had border disputes in the past, though they have since resolved their boundary issues.
- India and Bangladesh have had disagreements over water resources, particularly with the Ganges River.
- Bangladesh has seen rising anti-India sentiments due to India's perceived anti-Muslim activities.
- India and Bangladesh have differing foreign policies.

Conclusion:

The relationship between India and Bangladesh is a shining example of how two nations can come together to build a strong and meaningful partnership. Despite challenges, the two nations have made significant progress in various areas and continue to work together to build a brighter future for their people.



Great Nicobar Project: Environment Vs. Development

The Great Nicobar Project is currently mired in a debate between development and environmental concerns. Opposition parties have strongly objected to the Rs 72,000 crore project on the Greater Nicobar Islands, calling it an ideal experiment for ecological and human disaster. In 2023, the government announced that more than 9 lakh trees would be cut for this project, with a plan to plant 10 lakh trees in Haryana as compensation. This aspect has also raised questions about the project's viability and impact.

NITI Aayog has presented the Rs 72,000 crore project outlining a blueprint for the 'development' of the Andaman and Nicobar Islands. This project, named 'Holistic Development of Great Nicobar Island at Andaman and Nicobar Islands', includes plans to build a transshipment terminal, an international airport, a power plant, and a township. Alongside this ambitious development plan, questions of sustainable development, green development, and tribal justice have also emerged.

The Great Nicobar Biosphere Reserve has a wide range of ecosystems including tropical wet evergreen forests, mountain ranges reaching a height of 642 m (Mount Thullier) above sea level, and coastal plains. The region is known for its rich biodiversity making it a biodiversity hotspot in the true sense of the word. Great Nicobar is the southernmost island of the Nicobar archipelago. It consists of 103 870 hectares of unique and endangered tropical evergreen forest ecosystem. It is home to a rich ecosystem, including 650 species of angiosperms, ferns, gymnosperms, bryophytes, etc. In terms of fauna, there are more than 1800 species, some of which are endemic to the region.

About the project of NITI Aayog for Great Nicobar:

❖ The proposed port project mentioned by NITI Aayog for Great Nicobar aims to increase the island's share in the regional and global maritime economy, positioning it as a significant player in cargo shipment.

The construction of the airport is expected to enhance maritime services and boost the movement of domestic and foreign tourists to Great Nicobar Island, thereby strengthening the tourism sector.

- ❖ NITI Aayog has presented this project in its current form, but the plan to build a port in Great Nicobar has been in consideration since 1970. Back then, the Trade Development Authority of India, now known as India Trade Promotion Organization, conducted a techno-economic feasibility study with the objective of constructing a port close to the world's busiest sea route, the Strait of Malacca, to increase India's share in global maritime trade. However, due to the geographical environmental conditions of Great Nicobar and its tribal profile, a decision was not made at that time.
- ❖ Great Nicobar Island, located at the southernmost tip of India, is part of the Andaman and Nicobar archipelago, which consists of 600 islands. This hilly area is home to lush rainforests that receive 3500 mm of rain annually. These forests and beaches are the natural habitat of many rare species, including the giant leatherback turtle. Great Nicobar covers an area of 910 square kilometers and features mangrove and pandan forests along its coast.
- ❖ Two tribal communities live on this island: the Shompen and the Nicobari. The Shompen, with a total population of 250, live deep inside the forests

with no connection to the rest of the world. They sustain themselves by hunting and are considered a violent tribal group, categorized as Scheduled Tribes. The Nicobari community, on the other hand, engages in farming and fishing. There are two subgroups within the Nicobari: the Great Nicobari and the Little Nicobari. Both groups have their own languages, similar to the Shompen.

- ❖ Before the 2004 tsunami, the Great Nicobaris lived on the southeast and west coasts of the island. After the tsunami, the government rehabilitated them in Campbell Bay. Today, 450 Great Nicobaris live on the island, while the number of Little Nicobaris is around 850. The Little Nicobaris reside in Afra Bay in Great Nicobar, with some living in Pulomilo and Little Nicobar.
- ❖ Most of the people in Great Nicobar are those who came from mainland India and settled here. From 1968 to 1975, the Indian government settled retired military personnel and their families from Punjab, Uttar Pradesh, Bihar, Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu here. About 330 people were given 15 acres of land in seven villages located on the eastern coast of the island. These seven villages were - Campbell Bay, Govindnagar, Jogindernagar, Vijaynagar, Lakshmi Nagar, Gandhi Nagar.

Progress of Proposed International Container Transshipment Port Project:

- ❖ The Minister of Ports, Shipping and Waterways, Government of India visited Galathea Bay in Great Nicobar Island last year and reviewed the progress of the proposed International Container Transshipment Port (ICTP). It is envisaged as one of the flagship projects of Maritime India Vision 2030 as well as AMRUT Kal Vision 2047.
- ❖ It is consolidating its position as a transformational initiative with a total estimated cost of around Rs 44,000 crore. The project is strategically important for the country and is crucial for the economic and infrastructural development of the entire region. The Ministry of Environment, Forest and Climate Change (MoEFCC) granted environmental clearance on November 11, 2022. Phase 1 forest clearance has also been obtained. Further, the Department of Expenditure, Ministry of Finance has accorded “in-principle” approval for the overall development of Great Nicobar Island and the DPR of ICTP project is under finalization.
- ❖ The development of this mega container terminal is a part of the overall development of Great Nicobar Island.

The project is focused on three key drivers that can result in making it a leading container transshipment port, i.e. strategic location in close proximity (40 nautical miles) along the international shipping trade route, availability of natural water depth of more than 20 metres and cargo carrying capacity from all nearby ports including Indian ports.

- ❖ It is noteworthy that India has considerable potential to establish mega ports and compete with global ports. Four major intervention areas have been outlined under Maritime India Vision 2030, which include capacity addition; developing world-class mega ports; development of transshipment hubs in Southern India; and modernization of infrastructure. Currently, India has 5 major ports and 2 non-major ports with capacity of over 100 MTPA. There is a significant opportunity for India to establish mega ports and compete with global ports. Based on a detailed assessment of the key criteria for mega ports and the emerging growth potential of the clusters, 3 mega ports - Wadhawan-JNPT cluster, Paradip port and Deendayal port have been identified for development into mega ports with over 300 MTPA capacities.

Benefits of setting up mega ports:

- ❖ Currently, about 75 per cent of India's transshipped cargo is handled at ports outside India. Colombo, Singapore and Klang handle more than 85 per cent of this cargo, among which 45 per cent of cargo is handled at Colombo Port. The strategic location of Galathea Bay is a huge advantage for the EXIM trade as it is located on the international shipping route. With the development of ICTP at Galathea Bay, Indian ports will be able to attract more transshipment cargo. Moreover, developing the Galathea Bay Transshipment Port will lead to significant benefits such as foreign exchange savings, foreign direct investment, increased economic activity at other Indian ports, enhanced logistics infrastructure and, thus, efficiency, employment generation and increased revenue share.

Working on tourism potential in Great Nicobar Island:

- ❖ India's southernmost point Indira Point in Great Nicobar Island has also been visited by Government of India officials to explore tourism potential in Great Nicobar Island. The Minister of Ports, Shipping and Waterways, Government of India has directed the concerned officials to explore the possibility of developing the Indira Point area as a tourist destination and develop the necessary tourism facilities and amenities for this.

- ❖ The Minister of Ports, Shipping and Waterways also reviewed the progress of the Campbell Bay Port Project. The project is being constructed at a cost of about Rs 17 crore. It is worth mentioning that the existing jetties at Campbell Bay are inadequate for berthing large-sized vessels. Keeping this in mind, the jetty was extended by 50 meters to facilitate safe berthing of large vessels. On completion of the project, 150-meter long vessels will be able to berth which will provide more passenger and cargo movement between Great Nicobar and other islands. This extension will also facilitate double berthing, thereby increasing the capacity of the port. Keeping in view the future development of Great Nicobar Island and the expected increase in tourists and traders, this jetty will be useful to handle the traffic growth of the island. This island is about 1600 km away from Chennai while Great Nicobar is only 170 km away from the Indonesian border.
- ❖ Experts believe that the Great Nicobar Project will provide India with a strategic advantage in the region. The port will enable the deployment of Indian Navy warships, fighter jets, and missiles, allowing India to monitor the entire Indian Ocean. Additionally, the opening of this port will attract cargo ships that previously went to other countries, saving India's foreign currency. In future, increase in traffic at other ports of the country is expected, along with a boost in foreign investment.

Short Issues

Decrease in Water reservoirs storage levels: CWC

Why in News:

As per the recent data released by Central Water Commission (CWC) for 150 major reservoirs at least eight reservoirs had zero storage.

Highlights of the report:

- The 150 major reservoirs monitored by the CWC have a combined live storage capacity of 178.784 BCM, which is around 69.35 per cent of the total storage capacity created in the country.
- The total live storage available is 41.705 billion cubic meters (BCM), equating to 23 per cent of the total capacity. Consequently, the current storage is only 77 per cent of last year's levels and 94 per cent of the normal storage.
- This is a significant decrease from the 53.832 BCM recorded during the same period last year and the normal storage level of 44.511 BCM.
- Last year, during the corresponding period, storage was at 38 per cent. The normal storage at this time of the year is 31 per cent.
- At least eight reservoirs had zero storage; these were in Maharashtra, Karnataka, Telangana, Andhra Pradesh (AP), and Uttarakhand. While there were four others

which had less than 10 per cent storage in the states of AP, Gujarat, Maharashtra and Karnataka.

Regional Water Storage levels:

- **Northern region:** In Himachal Pradesh, Punjab and Rajasthan, there are 10 reservoirs for storage with a live storage capacity of 19.663 BCM. This has dropped to 5.864 BCM (30 per cent of total capacity).
- **Eastern region:** Assam, Jharkhand, Odisha, West Bengal, Tripura, Nagaland and Bihar have 23 reservoirs with a total live storage capacity of 20.430 BCM. The available storage is 5.645 BCM, or 28 per cent of the total capacity.
- **Western region:** Gujarat and Maharashtra have 49 reservoirs with a total live storage capacity of 37.130 BCM. The current live storage is 8.833 BCM, or 24 per cent of the total capacity.
- **Central region:** Uttar Pradesh, Uttarakhand, Madhya Pradesh and Chhattisgarh have 26 reservoirs with a total live storage capacity of 48.227 BCM.
- **Southern region:** Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu have 42 reservoirs with a total live storage capacity of 53.334 BCM.

Water Storage Levels in Indian River Basins:

- The report highlights better-than-normal storage in the Ganga, Indus, Brahmaputra, Brahmani and Baitarni, Narmada, Tapi, and Sabarmati basins.
- Storage levels are close to normal in the Subarnarekha,

Barak, Mahi, Godavari, Mahanadi, and the west-flowing rivers of Kutch and Saurashtra, including Luni, and the west-flowing rivers from Tapi to Kanyakumari.

- However, deficient storage in 13 east-flowing rivers between the Mahanadi and Pennar continued to have no water for a straight nine weeks. These included Rushikulya, Bahuda, Vamsadhara, Nagavali, Sarada, Varaha, Tandava, Eluru, Gundlakamma, Tammileru, Musi, Paleru and Munneru.
- Of the 19 river basins, 18 had below 50 percent storage, with only the Brahmaputra recording 58.58 percent of its total capacity. Storage in the Ganga river basin was 31.99 percent of its capacity, less than last year's storage but more than the 'normal' (average of the last 10 years) storage for the corresponding period.

Conclusion:

The river systems in India provide water for irrigation, drinking, domestic use, cheap transportation, and electricity. Water shortages in river basins severely impact socio-economic conditions, livelihoods, and agricultural activities in regions dependent on these rivers. Additionally, low water availability in reservoirs can affect summer crop yields (sown between the Rabi and Kharif seasons).

Air Pollution and Premature Deaths

Why in News:

According to a study conducted by researchers from Nanyang Technological University, Singapore from 1980 to 2020, around 135 million people died prematurely across the world due to air pollution.

Highlights of the study:

Number of untimely deaths:

- Between 1980 and 2020, PM 2.5 pollution caused premature deaths of 135 million people worldwide.
- Of these, 9.81 crore deaths occurred in Asia, including 4.9 crore deaths in China and 2.61 crore deaths in India.

Effects of PM 2.5:

- PM 2.5 particles are particles of diameter 2.5 micrometers or smaller.
- These particles come from sources such as vehicle emissions, industrial processes, forest fires and dust storms.
- These particles are very small and can easily enter the lungs, causing diseases such as stroke, ischemic heart disease, chronic obstructive pulmonary disease, lower respiratory infections and lung cancer.

Impact of Climate Change:

- Climate change events such as El Niño-Southern Oscillation, Indian Ocean Dipole and North Atlantic Oscillation increased fine particulate matter pollution and caused a 14 per cent increase in premature mortality.
- Increased temperatures, changes in wind patterns and reduced rainfall led to increased concentrations of pollutants.

Effects on health:

- According to the study, one-third of the premature deaths were linked to stroke (33.3%) and one-third to ischemic heart disease (32.7%).
- PM2.5 particles are particularly dangerous for vulnerable groups such as children, the elderly and people with respiratory diseases.

Use of satellite data:

- The researchers studied the levels of fine particles in Earth's atmosphere using NASA satellite data.
- 363 major air pollution events were recorded over the past four decades, with 15 occurring in 2002.
- Researchers will conduct more detailed studies to gain a deeper understanding of local air pollution patterns. Health agencies should properly allocate resources for PM2.5 pollution-related diseases.

PM and PM 2.5:

- PM is also called Particulate Matter or particle pollution, which is a mixture of solid particles and liquid droplets present in the atmosphere.
- The particles present in the air are so small that you cannot even see them with the naked eye. Some particles are so small that they can only be detected using an electron microscope.
- Particle pollution includes PM 2.5 and PM 10 which are very dangerous. PM 2.5 refers to atmospheric particulate matter that has a diameter of less than 2.5 micrometers, which is about 3% of the diameter of a human hair.

Conclusion:

This study shows that premature deaths caused by PM2.5 pollution and climate change are a serious health problem. Health services must be prepared to treat pollution-related diseases and governments must improve air quality management.

Przewalski Horses

Why in News:

Przewalski's horses have recently been reintroduced to the

steppes of Kazakhstan after nearly 200 years. They have been introduced as a part of an ambitious scheme to reintroduce the world's last wild horses to their original habitats.

About Przewalski Horses:

- Przewalski horses are the endangered sandy brown horses found across Central Asia. They are capable of withstanding harsh winters like those in Kazakhstan, where temperatures can drop below -30°C and food becomes scarce.
- In Kazakhstan, their reintroduction is part of conservation efforts, as the horses eat a wide variety of grasses, helping to spread seeds and thus help in conserving the ecosystem.
- Known as one of the world's last breeds of wild horse, they were named after Russian geographer Nikolay Przewalski, who discovered them in the late 19th century when their range had been reduced to western Mongolia.
- By the end of the 1960s, Przewalski's horses had disappeared from the wild but survived in captivity. They have been reintroduced in China and western Mongolia, where the population now numbers 850.

-: Prelims Insights :-

Restoration initiative in India: Namami Gange Programme:

- Launched in 2014, the government-led Namami Gange initiative aims to rejuvenate, protect and conserve the Ganges and its tributaries. It focuses on reforestation parts of the Ganges basin, promoting sustainable farming and reviving key wildlife species, including river dolphins, softshell turtles, otters and hilsa shad fish.
- The Ganges has been degraded along its 2,525-kilometre course from the Himalayas to the Bay of Bengal due to climate change, population growth, industrialization and irrigation.

About Altyn Dala Conservation Initiative:

- The Altyn Dala, or Golden Steppe, region of central Kazakhstan, is a vast area of grassland and wetlands covering some 7,000 square kilometres (2,700 square miles).
- Since 2005, the Altyn Dala Conservation Initiative in Kazakhstan has been working to restore the steppe, semi-desert, and desert ecosystems within the historic

range of the Saiga antelope, once critically endangered by hunting and habitat loss. The Saiga population, which had plunged to 50,000 in 2006, rebounded to 1.3 million in 2022.

- In addition to reviving and protecting the steppe, the initiative has conserved wetlands vital for approximately 10 million migratory birds, including key species like the sociable lapwing, red-breasted goose, white-headed duck, and Siberian crane.

Conclusion:

The Prague Zoo in the Czech Republic, which manages the studbook for the species, aims to begin returning Przewalski horses to the Altyn Dala, or Golden Steppe, in Kazakhstan. In Kazakhstan, the Przewalski horse is not the only endangered species receiving special attention. The round-snouted Saiga antelope, once on the brink of extinction, is also a major part of the initiative.

Two more Wetlands from Bihar in the Ramsar list

Why in News:

Two wetlands in Bihar have been added to the global list of wetlands of international importance under the Ramsar Convention, bringing the total number of such recognized ecosystems in India to 82.

More about the News:

- The Nagi and Nakti bird sanctuaries, situated in Bihar's Jamui district, have been recognized under the Ramsar Convention. These man-made reservoirs are located in the Jhajha forest range of Jamui and feature catchments surrounded by hills and dry deciduous forests.
- Both the sanctuaries were declared Wetlands of International Importance on World Environment Day, June 5.

About Nakti Bird Sanctuary:

- The Nakti Bird Sanctuary was created primarily for irrigation with the construction of Nakti Dam. Since then, the wetland and its surrounding area have become home to over 150 species of birds, mammals, fish, aquatic plants, reptiles, and amphibians.
- Among them are globally threatened species, such as the endangered Indian elephant (*Elephas maximus indicus*) and a vulnerable native catfish (*Wallago attu*).
- Designated as a Bird Sanctuary in 1984, the wetland is crucial as a wintering habitat for several migratory species, with over 20,000 birds congregating during the winter months. This includes one of the largest

gatherings of red-crested pochard (*Netta rufina*) on the Indo-Gangetic plain.

-: Prelims Insights :-

- A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention, also known as The Convention on Wetlands, an international environmental treaty signed on 2 February 1971 in Ramsar, Iran, under the auspices of UNESCO.
- BirdLife International, founded in 1922 by American ornithologists T. Gilbert Pearson and Jean Theodore Delacour, is a global partnership of conservation organizations (NGOs) dedicated to conserving birds, their habitats, and global biodiversity.
- Initially named the International Council for Bird Protection, it was renamed several times, becoming BirdLife International in 1993.
- It publishes a quarterly magazine, *World Birdwatch*, featuring news and articles on bird conservation.
- It is also the official Red List authority for birds for the International Union for Conservation of Nature (IUCN) and publishes the Important Bird Areas (IBA) inventory.

About Nagi Bird Sanctuary:

- The Nagi Bird Sanctuary was established after the Nagi River was dammed, leading to the formation of water bodies with clean water and aquatic vegetation.
- Recognized locally as a Bird Sanctuary in 1984 and internationally as an Important Bird and Biodiversity Area (IBA) by BirdLife International, it is crucial for migratory bird species.
- The wetland and its surroundings support over 75 bird species, 33 fish species, and 12 aquatic plant species. Notably, the sanctuary hosts one of the largest gatherings of bar-headed geese (*Anser indicus*) on the Indo-Gangetic plain.

Conclusion:

The recent addition of the two wetlands to the global list of wetlands of international importance under the Ramsar Convention will significantly aid in the efforts to conserve

birds and their habitats, contributing to the broader goal of global biodiversity conservation.

Global Soil Partnership

Why in News:

The 12th Plenary Assembly of Global Soil Partnership GSP was hosted by Food and Agriculture Organisation of the United Nations discussing the strategies for enhancing soil resilience and sustainability.

Highlights of the Assembly:

- During the three-day event, the GSP highlighted its ambitious goal to improve and maintain the health of at least 50% of the world's soils by 2030.
- A key highlight was the Soil Partners' Day, focused on fostering collaboration and sharing experiences in sustainable soil management. The US Department of State presented its "Vision for Adapted Crops and Soils (VACS) initiative," aiming to create resilient food systems through climate-adapted crops grown on healthy soils.
- The Kingdom of Thailand showcased its success stories within the framework of the proposal for a decade of soil health, with farmers emphasizing the role of local communities in sustainable soil management.
- Other notable participants included the Republic of Uzbekistan, the International "4 per 1000" Initiative, the International Centre for Research in Agroforestry (ICRAF), the Institut de Recherche pour le Développement (IRD), the Office Chérifien des Phosphates (OCP) Group, the Global Conservation Agriculture Network (GCAN), Leitat Technological Center, and the International Union for Conservation of Nature (IUCN).

About Soil Mapping for Resilient Agrifood Systems (SoilFER):

- Spearheaded by Central American and African countries, SoilFER is designed to gather critical soil data to inform policy and optimize fertilizer use at both national and local levels.
- **'4 per 1000' Initiative:** This initiative emphasizes carbon sinks' role, including those from carbon farming, in mitigating greenhouse gas emissions. It was launched during the COP21 climate talks in Paris and advocates wise management of the global carbon budget.

About the Global Soil Partnership:

- The Global Soil Partnership (GSP) is a globally recognized mechanism. It was established in 2012 with

the mission to position soils on the Global Agenda and promotes sustainable soil management.

- Hosted by the FAO, it works to improve soil governance to ensure productive soils, thereby enhancing food security, climate change adaptation and mitigation, and sustainable development for all.

Major Achievements by Global Soil Health Partnership:

Since its establishment in December 2012, the Global Soil Partnership has made significant achievements in positioning soils on the global agenda, including:

- Establishing an Intergovernmental Technical Panel on Soils and international networks for soil matters.
- Proposing and annually celebrating UN World Soil Day on December 5th and the International Year of Soils in 2015.
- Endorsing the revised World Soil Charter.
- Producing the Status of the World's Soil Resources 2015 report.
- Developing technical guidelines on soils for nutrition.
- Establishing Regional Soil Partnerships and Voluntary Guidelines for Sustainable Soil Management.

Conclusion:

The GSP's work is more critical than ever in the face of global challenges, as its commitment to sustainable soil management will play a vital role in transforming agrifood systems worldwide. By emphasizing collaboration, innovation, and local community involvement, the GSP aims to enhance soil health and resilience, which are essential for sustainable agriculture, food security, and climate adaptation.

OECD Report on Climate Finance

Why in News:

According to the "Climate Finance Provided and Mobilised by Developed Countries in 2013-2022" report, by OECD the developed countries have successfully breached the 100 billion goal for the first time.

Highlights of the report:

- The Climate Finance, provided and mobilized by developed countries from 2013 to 2022, is the OECD's seventh assessment of progress towards the UNFCCC goal agreed upon in 2009. This goal aimed to mobilize \$100 billion annually by 2020, a commitment later extended through to 2025, to assist developing countries in mitigating and adapting to climate change.
- According to new figures from the Organisation for

Economic Co-operation and Development (OECD), climate finance increased by 30% from 2021, amounting to \$26.3 billion, with developed countries providing and mobilizing \$115.9 billion in climate finance for developing countries in 2022.

- The OECD figures also reveal a rise in climate finance allocated for adaptation actions. After a slight drop in 2021, adaptation finance reached \$32.4 billion in 2022, three times the 2016 level.
- In 2019, the amount of public adaptation finance tracked by the OECD was \$18.8 billion, increasing to \$20.3 billion when mobilized private finance was included.
- Based on these figures, developed countries were about halfway towards meeting the 2019 COP26 Glasgow Climate Pact's call to double the provision of adaptation finance by 2025.

:- Prelims Insights :-

- Paris Climate Accord is a legally binding international treaty on climate change. It was adopted at the Conference of the Parties COP 21 in Paris in December 2015 by 196 countries.

India is a signatory to this accord.

New Collective Quantitative Goal (NCQG):

- The NCQG refers to the new annual amount that developed countries must mobilize from 2025 onward to finance climate action in developing countries, exceeding the \$100 billion per year promised but undelivered since 2020.
- The NCQG is crucial for developing countries, with discussions ongoing for a couple of years. At a two-day minister-level climate meeting in Copenhagen, Denmark, which concluded on March 22, some technical work to determine the NCQG was finalized.

What is Climate Finance?

- Climate finance refers to the significant investments needed for actions aimed at mitigating or adapting to the impacts of climate change.
- While adaptation involves anticipating the negative effects of climate change and taking appropriate actions to prevent or minimize the damage they can cause. One example of adaptation measures is constructing infrastructure to protect coastal communities from sea-level rise.

Conclusion:

While developed countries claim to meet the target of providing \$100 billion annually in climate finance to developing nations, the process is riddled with ambiguity and inadequacies. Much of the funding is repackaged as loans rather than grants and often intertwined with existing aid, blurring the lines of true financial assistance. The accumulated funds need to be distributed across various needs—mitigation, adaptation, loss and damage and others. However, climate finance flows are currently heavily skewed towards mitigation actions, while developing countries demand more funds for adaptation and other activities.

The State of World Fisheries and Aquaculture 2024

Why in News:

The 2024 edition of The State of World Fisheries and Aquaculture was released by FAO featuring the Blue Transformation in action.

Highlights of the Report:

- The report noted that the number of species harvested has varied greatly over the years, with major differences from region to region.
- Whiteleg shrimp (*Penaeus vannamei*), with 6.8 million tonnes, was the top aquatic animal species produced in 2022.

It was followed by:

- Cupped oysters *nei* (*Crassostrea* spp., 6.2 million tonnes).
- Grass carp (also known white amur; *Ctenopharyngodon idellus*, 6.2 million tonnes).
- Nile tilapia (*Oreochromis niloticus*, 5.3 million tonnes).
- Silver carp (*Hypophthalmichthys molitrix*, 5.1 million tonnes).
- Anchoveta (also known as Peruvian anchovy; *Engraulis ringens*, 4.9 million tonnes).
- The last was followed by Japanese carpet shell and catla, which in turn, was followed by the common carp and the Alaska or Walleye pollock.
- In 2022, half of the 75% of finfish harvested were marine species, while 44% were freshwater species. Marine finfish accounted for 38% of the total aquatic animals produced, with freshwater fishes comprising 33%.
- Until the late 1970s, finfish, also known as true fishes (distinguished from other aquatic animals like molluscs or crustaceans), made up about 90% of the total

production of aquatic animals, compared to 75% in 2022.

- Carps, barbels, and other cyprinids were the primary group of species produced in 2022, representing 18% of the production of aquatic animals. This was followed by miscellaneous freshwater species (11%) and Clupeiformes such as herrings, sardines, and anchovies (10%).
- The rise in aquaculture production has led to an increase in the shares of molluscs and crustaceans.

Highlights about India:

- With regard to India, the report highlights that catla, with over four million tonnes harvested in 2022, ranks eighth on the list of 'Top ten species items'.
- Traditionally farmed in the ponds of eastern Indian states, catla spread across the country during the second half of the 20th century.
- Alongside catla, Rohu (*Labeo rohita*) and Mrigal (*Cirrhinus mrigala*) are among the most farmed fish in India's inland fisheries.

Conclusions:

The report highlights the rise of aquaculture, which surpassed capture fisheries production in 2022, with inland aquaculture playing a major role. This shift underscores the need for sustainable practices and technological innovations to support the growing demand for aquatic animal species.

Shallow Aquifer Management

Why in News:

The Greater Hyderabad Municipal Corporation (GHMC) in a latest intervention has taken up Shallow Aquifer Management (SAM) model on a pilot basis in the city.

About Shallow Aquifer Management:

- Shallow Aquifer Management refers to the sustainable management of groundwater resources in shallow aquifers, typically defined as aquifers within 50 meters of the land surface.
- Shallow aquifers are crucial for meeting urban water demands, supporting ecosystems, and maintaining groundwater-dependent ecosystems.

How it is done?

- The project's concept is to drill shallow water injection borewells to a depth of 100-120 feet and pump out water in the shallow aquifers.
- This is done so that the layers underneath get recharged whenever there is rainfall, while collecting water from the surrounding watershed and channelling it through

recharge pits.

- Thus, the underground layers are recharged, and water table rises.

Shallow Aquifer Management Pilot model in India:

- The Shallow Aquifer Management (SAM) pilot model in India is an initiative by the Ministry of Housing and Urban Affairs under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme.

Key aspects of the pilot model at Habsiguda and Sainikpuri:

- The Shallow Aquifer Management (SAM) pilot models at Habsiguda and Sainikpuri are initiatives by the Greater Hyderabad Municipal Corporation (GHMC) to address groundwater depletion and flooding.

Location:

- Kakatiya Park at Habsiguda.
- E-sector park at Sainikpuri.

Objective:

- Implement Shallow Aquifer Management as a sustainable urban water management technique.
- Address groundwater depletion, drying up of borewells, and rapid flooding in urban areas.

Methodology:

- Drill shallow water injection borewells (100-120 feet deep) to recharge shallow aquifers.
- Pump out water from shallow aquifers, allowing rainfall to recharge underlying layers through surrounding watershed and recharge pits.

Benefits:

- Enhances groundwater recharge.
- Reduces flooding.
- Augments water availability for future use.
- Demonstrates a sustainable urban water management approach.

Cities selected for SAM pilot projects:

- Bengaluru (Karnataka)
- Chennai (Tamil Nadu)
- Dhanbad (Jharkhand)
- Gwalior (Madhya Pradesh)
- Hyderabad (Telangana)
- Jaipur (Rajasthan)
- Kolkata (West Bengal)
- Pune and Thane (Maharashtra)
- Rajkot (Gujarat)

What is an aquifer?

- It is a body of porous rock or sediment saturated with groundwater. Groundwater enters an aquifer as

precipitation seeps through the soil.

- It can move through the aquifer and resurface through springs and wells.

Conclusion:

The success of the pilot models at Habsiguda and Sainikpuri highlights the potential of SAM to address urban water management issues in India, and serves as a model for future implementations.

Bayesian Convolutional Neural Network

Why in News:

Indian National Centre for Ocean Information Services (INCOIS) has developed a new product called Bayesian Convolutional Neural Network (BCNN), which uses cutting-edge technologies like AI, deep learning and machine learning to improve ENSO phase forecasts. BCNN can predict El Nino and La Nina events up to 15 months in advance, surpassing other models that can only forecast up to six to nine months ahead.

About BCNN:

- The Bayesian Convolutional Neural Network (BCNN) is indeed a cutting-edge technology that leverages the strengths of AI, deep learning, and machine learning to improve predictions related to El Niño-Southern Oscillation (ENSO) phases.
- By accounting for slow oceanic variations and atmospheric coupling, BCNN excels in predicting El Niño and La Niña events. Its ability to calculate the Niño3.4 Index Value with improved precision is a significant advancement, enabling more reliable and timely weather predictions.
- The integration of dynamic models with AI enables BCNN to forecast El Niño and La Niña conditions with a remarkable 15-month lead time, surpassing other models' capabilities.
- This technology has significant implications for various industries, including agriculture, fisheries, and disaster management, where accurate and timely weather predictions are crucial.

About INCOIS:

- Indian National Centre for Ocean Information Services is an autonomous body under the Ministry of Earth Sciences (MoES) and a unit of the Earth System Science Organisation (ESSO).
- Its mandate is to provide ocean information and advisory services to various stakeholders through sustained ocean observations and research.

About weather models:

- **Statistical Models:** These models generate forecasts based on historical data and statistical techniques, using information from various sources.
- **Dynamic Models:** These models use complex mathematical simulations, run on High-Performance Computers (HPC), to forecast the behavior of the atmosphere. Dynamic models are generally more accurate than statistical models, as they take into account the physical processes governing the atmosphere.
- Dynamic models, like the one used in the Bayesian Convolutional Neural Network (BCNN), are particularly useful for predicting complex weather phenomena like El Niño and La Niña events.

About ENSO:

- ENSO is a climate phenomenon characterized by fluctuations in the temperature of the central and eastern tropical Pacific Ocean and the atmosphere above it. This, in turn, affects global atmospheric circulation and influences weather patterns worldwide.

ENSO has three phases:

- **Neutral Phase:** The eastern Pacific is cooler than the western Pacific due to prevailing wind systems that sweep warmer surface waters towards Indonesia.
- **El Niño (Warm Phase):** Weaker wind systems allow warmer waters to dominate the eastern Pacific, causing trade winds to weaken and even reverse direction, bringing warm water from the western Pacific towards the Americas.
- **La Niña (Cold Phase):** Cooler-than-average sea surface temperatures in the equatorial Pacific, stronger trade winds, and warmer water pushed towards Asia.
- In India, El Niño conditions typically lead to a weak monsoon and intense heat waves, while La Niña conditions result in a strong monsoon.

Conclusion:

BCNN has the potential to revolutionize weather forecasting and climate prediction, enabling better decision-making and more effective resource management. Its applications can have a significant impact on society, economy, and the environment, making it a promising technology for a more resilient and sustainable future.

State of Global Air Report

Why in News:

The State of Global Air report 2024, a collaboration of the Health Effects Institute and the Institute for Health

Metrics and Evaluation's Global Burden of Disease Project, is produced in partnership with UNICEF and focuses on children's health.

Highlights of The Report:

Impact on Children Under Five:

- In 2021, a total of 709,000 deaths in children under five were linked to air pollution, this represents 15% of all global deaths in children under five.
- Of these, most (507,500) were linked to household air pollution from cooking with solid fuels, and 201,000 were linked to ambient PM2.5.
- Among children 5-14 years of age, air pollution was linked to 16,600 deaths.
- At the country level, the highest death rates were from Chad (159 deaths/100,000 people), South Sudan (129/100,000 people), Central African Republic (128/100,000 people), Nigeria (109/100,000 people), Niger (108/100,000 people), Burkina Faso (108/100,000 people) and Papua New Guinea (107/100,000 people).
- In several countries of Africa (Niger, Rwanda, Malawi, Senegal, Ethiopia, Uganda, and Mozambique) and Asia (Afghanistan, Bangladesh, and India), more than 40% of all deaths from lower respiratory infection (LRI) in children under five are attributed to air pollution.
- However, pollution-related deaths among children under five have remained high in some regions, particularly in South Asia and East, West, Central, and Southern Africa.
- In 2021, India (169,400 deaths), Nigeria (114,100 deaths), Pakistan (68,100 deaths), Ethiopia (31,100 deaths), and Bangladesh (19,100 deaths) saw the largest numbers of air pollution-related deaths among these children.

Impact On Neonatal Health:

- In 2021, 572,000 neonatal deaths were linked to air pollution, representing 26% of the total newborn deaths.
- The highest impacts were seen in countries in Asia and Africa, where millions of households continue to rely on polluting energy sources for cooking.

Way Forward:

With 99% of the world's population exposed to harmful levels of PM2.5, air pollution contributed to 1.1 million deaths in 2021 alone. Air pollution is a huge and growing challenge to public health. It is now the second-largest risk factor for premature death worldwide.

Study on Persistent Organic Pollutants

Why in News:

A UN study has found decline of 12 Persistent Organic Pollutants (POPs), such as DDT, regulated globally since 2004. The study, implemented by UN Environment Programme (UNEP) and funded by the Global Environment Facility, stresses the importance of POPs monitoring, caution in introducing alternatives and addressing gaps in awareness and regulation.

Key points on study:

- The study was conducted across 42 countries in regions where data on POPs is limited. It includes Africa, Asia, Latin America and the Caribbean, and the Pacific Islands to monitor 30 POPs listed under the Stockholm Convention as of 2021. Samples were collected between 2016 and 2019.
- POPs remain omnipresent, despite efforts to reduce their use and production.
- The list of 30 POPs monitored in the study includes pesticides and industrial chemicals, as well as unintentionally released POPs that are by-products of industrial processes and from incomplete combustion (e.g., open burning of waste).
- Data shows a global decline in the levels of 12 POPs initially listed in the 2004 Stockholm Convention; the report credits this trend to regulatory actions taken since.
- The use of DDT, once deployed in agriculture and now highly restricted, has decreased in human milk samples by over 70 per cent since 2004 on global average. Nevertheless, DDT remains the most prevalent POP in human milk, particularly in countries where it was intensively used.
- Long-regulated chemicals, such as dieldrin and polychlorinated biphenyls (PCBs), were detected at elevated levels in the air across the African continent, the Caribbean and Latin America.
- Some banned chemicals have been replaced by the industry with other chemicals, which were later found to also have POPs properties, such as per- and polyfluoroalkyl substances (PFAS). Of the thousands of PFAS, three key chemicals (PFOS, PFOA, PFHxS) are listed under the Stockholm Convention.
- All of them were found in human milk. PFAS were also found in drinking water in remote islands, in levels far exceeding European Union and United States standards.
- Newly listed POPs are increasingly difficult to monitor,

even by the world's top laboratories.

About Persistent organic pollutants:

- Persistent organic pollutants (POPs) are chemicals of global concern due to their potential for long-range transport, persistence in the environment, ability to bio-magnify and bio-accumulate in ecosystems, as well as their significant negative effects on human health and the environment.
- The most commonly encountered POPs are organochlorine pesticides, such as DDT, industrial chemicals, polychlorinated biphenyls (PCB) as well as unintentional by-products of many industrial processes, especially polychlorinated dibenzo-p-dioxins (PCDD) and dibenzofurans (PCDF), commonly known as dioxins.

Conclusion:

The decline in DDT levels is a success story, but the rise of other POPs highlights the need for continued vigilance and action. The report emphasizes the importance of monitoring and managing POPs to protect human health and the environment. Overall, the report highlights a mixed progress in addressing POPs, with a need for continued efforts to address the increasing levels of other harmful chemicals.

ATCM-46 and CEP-26

Why in News:

India has successfully concluded the hosting of 46th Antarctic Treaty Consultative Meeting (ATCM-46) and 26th Committee on Environmental Protection (CEP-26) from May 20th to May 30th, 2024 in Kochi, Kerala.

Highlights of ATCM-46 and CEP-26:

- The ATCM-46 and CEP-26 were hosted by the Ministry of Earth Sciences, Government of India, through the National Centre for Polar and Ocean Research (NCPOR), Goa, with support from the Antarctic Treaty Secretariat headquartered in Argentina.
- The event witnessed the reaffirmation of the Antarctic Treaty (1959) and the Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol, 1991) by the Parties.
- The CEP-26 addressed a range of issues and contributed towards the implementation of the Environmental Protocol in Antarctica. The Committee agreed to prioritize the work towards managing the implications of sea ice change, enhancing environmental impact assessments of major activities, protecting the emperor penguin and developing an international framework for

environmental monitoring in Antarctica.

- Following the CEP's advice, the Parties adopted 17 revised and new management plans for Antarctic Specially Protected Areas (ASPAs) and made several modifications and additions to the list of Historic and Monument sites.
- The ATCM-46 was held with the overarching theme of Vasudhaiva Kutumbakam, a Sanskrit phrase that means one Earth, one family, one future. The ATCM also encouraged efforts to increase renewable energy use and to ensure robust implementation of biosecurity measures to minimize the risks of Highly Pathogenic Avian Influenza.

About Antarctic Treaty:

- The Antarctic Treaty was signed in Washington on December 1, 1959, by the twelve countries active in Antarctica during the 1957-58 International Geophysical Year (IGY).
- Its original signatories included Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union, the UK, and the US. It entered into force in 1961 and has since been joined by many other nations, bringing the total number of Parties to 56.
- There are two types of parties to the Antarctic Treaty - Consultative (29) and non-Consultative (27).
- Although non-consultative are invited to attend the Consultative Meetings, they do not participate in the decision-making.
- India has been a Consultative Party (those demonstrate their interest in Antarctica by conducting substantial research activity there) to the Antarctic Treaty since 1983.

About ATCM and CEP under the Antarctic Treaty:

- **Antarctic Treaty Consultative Meeting (ATCM):** ATCM serve as forums for Antarctic Treaty Consultative Parties and other stakeholders to address pressing environmental, scientific, and governance issues in Antarctica. From 1961 to 1994, the ATCM met once every two years, but since 1994, the meetings have been held annually. The ATCM is hosted by the Consultative Parties in alphabetical order of their English names.
- **Committee for Environmental Protection (CEP):** Established under the Protocol on Environmental Protection to the Antarctic Treaty (the Madrid Protocol) in 1991, the CEP advises the ATCM on environmental protection and conservation in Antarctica.
- **The Antarctic Treaty Secretariat (ATS):** The ATS, established in 2004, serves as the administrative hub for

the Antarctic Treaty System, coordinating the ATCM and CEP meetings. It monitors compliance with Treaty provisions and agreements, providing assistance and guidance to Treaty Parties on implementation and enforcement.

Conclusion:

The successful hosting of the 46th ATCM and 26th CEP in India underscores our collective resolve to safeguard Antarctica's unique ecosystems and promote global environmental sustainability. Through dialogue, cooperation, and concerted action, we can ensure that Antarctica remains a beacon of peace, science, and environmental protection for generations to come.

Global Assessment of Nitrous Oxide (N₂O) Emissions

Why in News:

A report named Global assessment of nitrous oxide emissions has been published in journal Earth System Science Data which provides global assessment of nitrous oxide emission.

Highlights of the report:

- Report mentioned that India is second largest emitter of nitrous oxide next only to china which have emitted about 16 percent of nitrous oxide.
- India and china both contributed about 27 percent of emission in 2020.
- Nitrous oxides mostly has been emitted by fertiliser sector.
- N₂O emissions have grown by 40% from 1980 to 2020, with agriculture, industry, and forest burning being major human sources.
- Fertilizers and livestock manure are significant contributors, responsible for 70% and 30% of agricultural emissions, respectively.

Concern related to nitrogen fertilizers

- N₂O emissions from human activities have increased by 40% (three million metric tons of N₂O per year) in the past four decades, with growth rates between 2020 and 2022 higher than in any previous period since 1980, when reliable measurements began.
- Agricultural production using nitrogen fertilizers, such as ammonia, and animal manure contributed 74% of the total anthropogenic N₂O emissions in the last decade. N₂O emissions from human activities are responsible for 6.4% of the effective radiative forcing of greenhouse gases, and have added about 0.1°C to current global warming.

- The growing demand for meat and dairy products has also contributed to an increase in emissions through the increase in manure production, which also causes N₂O emissions. Increased nitrogen fertilizers used in the production of animal feed have also contributed to the increase.
- The top five country emitters by volume of anthropogenic N₂O emissions in 2020 were China (16.7%), India (10.9%), the United States (5.7%), Brazil (5.3%), and Russia (4.6%).

Effects of N₂O emission:

- Once emitted, N₂O stays in the atmosphere for longer than the average human lifespan (117 years), and therefore its climate and ozone impacts are long-lived.
- In addition to N₂O emissions, the inefficient use of synthetic nitrogen fertilizers and animal manure also leads to the pollution of groundwater, drinking water, and inland and coastal waters.

Conclusion:

This report on the nitrous oxide budget is timely and alarming. India ranks second in the world concerning N₂O emissions from nitrogen fertilizers, which are all subsidised by over 80% in India. In addition to their emissions contributing to climate change, nitrogen fertilizers are polluting water bodies. It's time India takes this wake-up call seriously and changes cropping systems and production practices. Fertilizer subsidies should be repurposed to support alternative production systems.

Cheetahs in India

Why in News:

The Madhya Pradesh government has completed its preparations for the reintroduction of cheetahs in the Gandhi Sagar Wildlife Sanctuary.

Important facts:

- The Gandhi Sagar Wildlife Sanctuary is the second home for cheetahs in India, after the Kuno National Park (KNP).
- The sanctuary is spread over 64 square kilometers and is protected by a wired fence.
- Prey animals have been relocated from Kanha, Satpura, and Sanjay tiger reserves to Gandhi Sagar.
- A hospital is being constructed to provide medical services to cheetahs.
- A team of veterinarians from the KNP will visit the sanctuary to provide guidance on the construction of the hospital.

- The decision on the time and other formalities regarding the settlement of cheetahs in this sanctuary will be taken by the National Tiger Conservation Authority (NTCA).

About cheetah in India:

- The Asiatic cheetah was once found in most of India, but they became extinct in 1952 due to hunting and trapping.
- In 2022, cheetahs from Namibia and South Africa were introduced to Kuno National Park as part of Project Cheetah. Project Cheetah is an Indian government program aimed at reintroducing cheetahs. The cheetahs were reintroduced in the Kuno National Park, which had adequate prey population to support about 20 cheetahs.
- As of March 2024, the total number of cheetahs in the national park was 27.

About African cheetah:

- **Speed:** African cheetahs are the fastest land animal on Earth, reaching speeds of up to 70 mph (113 km/h).
- **Habitat:** They inhabit grasslands, savannas, and open plains in Africa, from South Africa to Ethiopia.
- **Diet:** Cheetahs primarily feed on small to medium-sized antelopes, such as Thomson's gazelles and impalas.
- **Conservation status:** Listed as Vulnerable on the IUCN Red List, with estimates suggesting only 6,600 individuals remain in the wild.
- **Physical characteristics:** Yellowish-brown coat with black spots, white belly, and a distinctive black "tear line" running from eye to mouth.
- **Behavior:** Diurnal, solitary animals, only coming together for mating. They have a large home range, often overlapping with other cheetahs.

About Asiatic cheetah

- **Subspecies:** The Asiatic cheetah (*Acinonyx jubatus venaticus*) is a subspecies of cheetah, once found in Iran, India, and Pakistan.
- **Extinction:** Declared extinct in India in 1952, and considered critically endangered in Iran, with fewer than 50 individuals remaining.
- **Physical differences:** Smaller than African cheetahs, with a more grayish-brown coat, and a distinctive black stripe running along the spine.
- **Habitat:** Inhabited arid regions, grasslands, and deserts in Iran, and formerly in India and Pakistan.
- **Diet:** Primarily fed on small to medium-sized antelopes, such as gazelles and hares.



Science & Technology

Deep Sea Mission will expand India's indigenous capacity

Recently, while chairing a meeting to discuss the 100-day action plan of the Ministry of Earth Sciences, the Earth Sciences Minister highlighted India's achievement of launching a Deep Sea Mission, a feat accomplished by only a few countries. India is set to become the sixth country to launch its own Deep Sea Mission. In the meeting, the Ministry of Earth Sciences emphasized the importance of developing a resilient blue economy to empower people dependent on the ocean and its energy for their livelihood. The Ministry of Earth Sciences (MoES) is the nodal ministry implementing the ambitious Deep Sea Mission.

Outlining the mission, the MoES stated that the mission encompasses not only mineral exploration but also the development of marine science, the discovery of flora and fauna, and the conservation of marine biodiversity. In addition to this, the National Institute of Ocean Technology (NIOT) continues its efforts to develop Matsya 6000, aiming to achieve the capability to reach a depth of 6000 meters in the sea. Following the formation of the new government in India, the MoES has reviewed the progress of this project and directed officials to complete the first phase of the Harbor Trial by September 2024 and subsequent tests by 2026. The Deep Sea Mission has the potential to contribute immensely to the overall development of the Indian economy.

Necessity of Deep Sea Mission:

❖ Science states that about 70 percent of the Earth is covered by water, home to diverse marine life. Despite advancements in modern technology and science, about 95.8% of the deep sea remains a mystery. Additionally, there are various types of minerals are found at depths of 6,000 meters below the sea, which have not yet been studied. To address this, the Union Cabinet approved the Deep Ocean Mission to explore the depths within India's maritime boundary. This mission includes study and survey work on these minerals.

- ❖ **Samudrayaan Mission:** As part of the Samudrayaan Mission launched by the Union Ministry of Earth Sciences, India aims to send three people to a depth of 6,000 meters for exploration. The Deep Ocean Mission has a total budget of Rs 4,077 crore for five years, with an estimated cost of Rs 2,823.4 crore for the first phase of three years(2021-2024). With this mission, India joins an elite group of countries, including the US, Russia, Japan, France, and China, that have the capability to undertake manned undersea missions.
- ❖ The vehicle for the Deep Sea Mission has been designed and the realization of various instruments and components is in progress. This manned submersible vehicle facilitates direct human observation of the deep sea, enabling the search for rich mineral resources such as nickel, cobalt, rare earth elements, and manganese. It also collects various samples for later analysis. Both this machine and unmanned vehicles (tethered and automated) have been developed for integrated mining at depths of up to 6000 meters, aimed at exploring deep sea resources and conducting biodiversity assessments. Advanced technologies in metallurgy, energy storage, underwater navigation, and manufacturing facilities are crucial for developing more efficient, reliable, and safe manned submersibles.

The significance of Blue Economy:

- ❖ To understand the importance of the Blue Economy related to the Deep Ocean Mission, one must recognize the economic benefits it holds. The Government of India is set to spend Rs 4,077 crore on this mission, which will be allocated in different phases. According to the Global Marine Biotechnology Industry Report, the global market for this sector is projected to reach around \$5.4 billion by 2027. A World Bank document also highlights that the aim of the Blue Economy is to promote economic growth, social inclusion, and the preservation or improvement of livelihoods, while ensuring the environmental sustainability of oceans and coastal areas.
- ❖ Scientific findings show that marine resources are limited, and human activities have drastically declined the 'health' of the oceans, with the impact on marine health clearly visible. India's Ministry of Earth Sciences states that unique technology will facilitate the exploration of non-living resources, such as polymetallic manganese nodules, gas hydrates, hydrothermal sulfides and cobalt crusts, found at depths of 1,000 to 5,500 meters in the ocean. For this purpose, the preliminary design of the manned submersible 'Matsya 6000' has been prepared, and the process of materializing it has started with various organizations, including ISRO, IITM, and DRDO.
- ❖ Vehicles sent for underwater exploration need to be capable of activities such as high-resolution bathymetry, biodiversity assessment, geological observation, search operations, rescue operations, and engineering support. It is noteworthy that the manned submersible Fendouze, developed by China in 2020 with upgraded underwater technologies, recently dived to a depth of 11,000 meters.

Use of Manned Submersible for Deep Sea Mission:

- ❖ The Manned Submersible is designed to carry three persons in a 2.1-meter diameter titanium alloy personnel sphere with a normal operational capacity of 12 hours and an emergency operational capacity of up to 96 hours. Some of the critical subsystems of the Manned Submersible include the development of the titanium alloy personnel sphere, a human support and protection system in enclosed spaces, low-density modules, and ballast and trim systems. It will also be equipped with pressure-compensated batteries and propulsion systems, control and communication systems, and launching and recovery systems.
- ❖ The Manned Submersible has been reviewed and certified according to the International Association

of Classification and Certification Societies norms for human use at depths of up to 6,000 meters. This certification covers system design, concept of operation, functionality and integrity of subcomponents, emergency rescue, and failure condition analysis. The collaboration with the Indian Space Research Organisation to develop a titanium hull that can withstand extreme pressure has been particularly appreciated. Additionally, work is ongoing to develop 'self-flotation' technology to handle emergency situations, allowing the submersible to stay afloat for up to 72 hours.



What are Polymetallic Sulphides (PMS)?

- ❖ Polymetallic sulphides are precipitates formed from liquids due to hot magma on the sea floor. These sulfides contain iron, copper, zinc, silver, gold, platinum. It is estimated that polymetallic nodules (PMN) are scattered at a depth of about 6000 meters in the Indian Ocean.
- ❖ The metals obtained from them are also used in electronic devices, smartphones, batteries and solar panels. It is regulated by the International Seabed Authority, which is an autonomous international organization. It has been established under the United Nations Convention on the Law of the Sea and it allocates 'areas' for deep sea mining.

Conclusion:

By accelerating the Blue Economy, India can realize its goal of becoming a \$5 trillion economy and the third-largest economy in the world. Recognizing the importance of the ocean economy, the central government has prioritized this sector. The United Nations has declared the decade of 2021-2030 as the Decade of Ocean Science for Sustainable Development, highlighting the significance of the oceans. India's unique maritime position, with nine coastal states, 1,382,000 people, and a 7,517 km long coastline, makes its

role crucial in this global initiative. The Indian government's vision of a New India by 2030 includes the Blue Economy as one of the ten key dimensions of development. The Deep Ocean Mission aligns with this vision, supporting the government's Blue Economy policy by promoting the sustainable use of marine resources for economic growth, improved livelihoods and jobs, and a robust ocean ecosystem. This mission has the potential to significantly contribute to the country's GDP.

Short Issues

TRISHNA Mission

Why in News:

The Indian Space Research Organisation (ISRO) is collaborating with French space agency CNES on an ambitious new satellite mission called TRISHNA, which will be launched in 2025. ISRO and CNES will monitor the Earth's surface through the high-quality thermal infrared imaging satellite 'TRISHNA'. Earlier, ISRO and CNES have also worked together on the 'Megha Tropiques' mission in 2011 and 'Saral Altika' mission in 2013.

About the satellite:

- The 770 kg satellite will be launched into a sun-synchronous orbit at an altitude of 761 km, carrying two state-of-the-art imaging payload sensors, a Visible and Near Infrared (VNIR) sensor and a Visible Short Wave Infrared sensor (VSWIR). TIR has four thermal bands to measure temperature, surface brightness, temperature and emissivity.
- TIR will also study climate change phenomena, where sea and land surface temperature are the key variables. VSWIR will complement TIR to provide observations in seven bands. It will provide information on water use, soil pollution, coastal and inland water monitoring, urban microclimate monitoring, volcano monitoring, geothermal exploration, vegetation and land coverage, cryosphere monitoring and atmosphere and clouds.

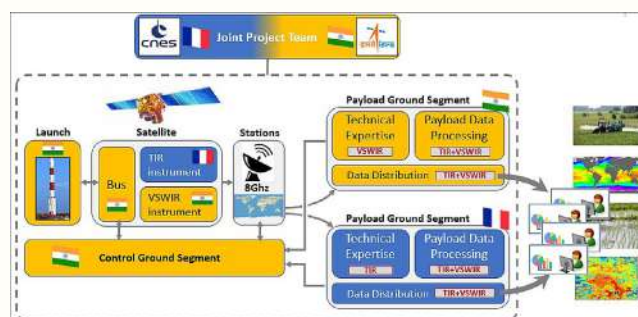
Objective:

- The primary objective of TRISHNA is to monitor the energy and water budget of the continental biosphere,

assess terrestrial water stress and water use efficiency. It is also to provide high-resolution observations of coastal and inland water quality dynamics.

Features:

- High spatial resolution (57 m for land/coastal, 1 km for ocean/polar).
- Unique combination of full-fledged orbital time of 2-3 days.
- Unprecedented monitoring of key climate variables such as surface temperature, soil moisture, evapotranspiration rate and vegetation health indicators.



Benefits:

- The high-quality data obtained from TRISHNA will directly help tackle some of the biggest climate challenges facing humanity. In agriculture, it will help optimize irrigation, improve crop productivity and enable sustainable water management practices.
- Urban planners will benefit from detailed urban heat

island mapping, while water resource managers can monitor pollution in rivers, lakes and coastal areas. The mission will also support areas such as disaster management by detecting forest fires and volcanic activity.

- Measurements of key climate variables such as evapotranspiration, snow/glacier dynamics and permafrost changes by will help improve climate models and support global mitigation efforts through the United Nations Sustainable Development Goals.

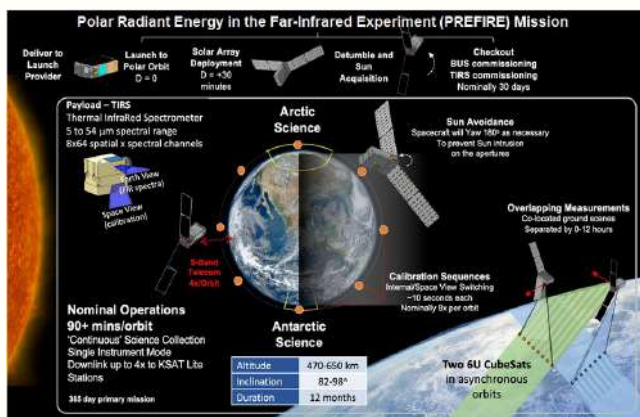
Conclusion:

The Trishna mission can demonstrate its potential to aid sustainable development, climate resilience and environmental protection, paving the way for future collaborations and applications in Earth observation.

PREFIRE Mission

Why in News:

NASA launched the tiny satellite, called PREFIRE (Polar Radiant Energy in the Far-InfraRed Experiment), to study the heat emissions from Earth's poles and to understand how Earth's polar regions influence the amount of energy our planet absorbs and releases.



About the Mission:

- The mission uses two cube satellites with thermal infrared spectrometers that can measure the heat emissions from the polar regions.
- The data collected by the PREFIRE mission can help improve climate and ice models.
- The mission can also help predict how changes in the polar regions can affect the weather, sea levels, and snow and ice cover.

Importance of PREFIRE Mission:

- **Improved climate modelling:** PREFIRE's data will help refine climate models, enabling better predictions of future climate change and its impacts.
- **Understanding polar energy balance:** The mission will provide insights into the Earth's energy budget, helping scientists understand how the polar regions regulate the planet's temperature. The Earth's energy budget is the balance between incoming heat energy from the Sun and the outgoing heat given off by the planet. The difference between the two determines the planet's temperature and climate.
- **Sea level rise:** By studying polar heat emissions, PREFIRE will help scientists better understand the contributing factors to sea level rise.
- **Weather pattern predictions:** The mission's data will improve weather forecasting and prediction of extreme weather events.
- **Climate change mitigation and adaptation:** PREFIRE's findings will inform strategies for mitigating and adapting to climate change.
- **Enhancing international collaboration:** PREFIRE fosters global cooperation in Earth science research, promoting shared understanding and solutions.

About CubeSats:

- CubeSats are essentially miniature satellites whose basic design is a 10 cm x 10 cm x 10 cm (which makes up for "one unit" or "1U") cube, just a little bigger than a Rubik's cube and weight not more than 1.33 kg. Depending on the CubeSat's mission, the number of units can be 1.5, 2, 3, 6, and 12U, according to NASA.
- These satellites were first developed in 1999 by California Polytechnic State University at San Luis Obispo (Cal Poly) and Stanford University as educational tools. However, owing to their low cost and less mass in comparison to traditional satellites, they began to be put in orbit for technology demonstrations, scientific research, and commercial purposes.

Conclusion:

PREFIRE mission will contribute significantly to advancing our understanding of the Earth's climate system and informing efforts to address the challenges of climate change.

New Light-Based Tool for Spotting Viral Infections

Why in News:

Researchers from Harvard University, Cambridge and

Jiangsu University, Zhenjiang, have developed a light-based tool to detect viral infections in cells.

The tool uses the following principles and techniques:

- **Cellular changes:** Viral infections stress cells, changing their shape, size, and features.
- **Light diffraction:** Light shone through infected cells creates a diffraction pattern that is different from that of healthy cells.
- **Fingerprinting:** The diffraction pattern is used to create a "fingerprint" that identifies infected cells.
- **Parameters:** The fingerprint is based on two parameters: the contrast between light and dark stripes and the inverse differential moment.
- **Methodology:** With the help of a microscope light is passed through cells which are infected with a virus. The diffraction pattern received is then compared with that of healthy cells.

This tool offers several advantages:

- **Cost-effectiveness:** The equipment cost is about a tenth of the standard method.
- **Time-saving:** Detection takes only about two hours, compared to 40 hours for the standard method.
- **Accuracy:** The light-based method is as accurate or even more accurate than the standard method.
- **Ease of use:** The tool is simple to use and can be applied in various settings.

About viral infection:

Viral infections occur when a virus enters a host organism and begins to multiply, causing a range of symptoms and diseases. Here are some key aspects of viral infections:

Types of viral infections:

- Respiratory (e.g., COVID-19, influenza)
- Gastrointestinal (e.g., norovirus)
- Skin and mucous membrane (e.g., herpes simplex)
- Bloodborne (e.g., HIV, hepatitis)
- Neurological (e.g., encephalitis, meningitis)

Transmission:

- Direct contact (touch, sexual contact)
- Airborne (inhalation)
- Vector-borne (mosquitoes, ticks)
- Contaminated food and water
- Mother-to-child (during pregnancy or childbirth)

Treatment:

- Antiviral medications
- Vaccines (for prevention)
- Surgery (in some cases)

Conclusion:

This innovative tool has far-reaching implications for healthcare, research, and global disease management, particularly in the context of pandemics and outbreaks. By harnessing the power of light, scientists have opened up new avenues for combating viral infections and improving public health.

Nidoviruses

Why in News:

German Cancer Research Center scientists have issued a warning that the phenomenon of "crossbreeding" between distinct viruses may give rise to the creation of an entirely new, modified virus possessing potentially more hazardous traits.

In depth research:

- Researchers identified 40 novel nidoviruses in a variety of vertebrates using artificial intelligence. These RNA viruses have the potential to cause a pandemic and deadly diseases through crossbreeding. Bats are probably where these viruses are most likely to hide.
- The researchers found that when host animals are infected with different viruses concurrently, a new virus may emerge as a result of the recombination of viral genes.
- This virus evolution is more pronounced and radical when two viruses from entirely different families interact. Such evolution may lead the virus to cause fatal and dangerous diseases to the host animal.
- Such natural crossbreeding processes among viruses can easily occur in bats, which are known to carry a large number of viruses inside their bodies. Researchers suggest that the SARS-CoV-2 coronavirus may have also developed among bats.

About Nidoviruses:

- Nidoviruses are a group of viruses that belong to the order Nidovirales. They are positive-sense RNA viruses that infect vertebrates, including humans, animals, and fish.

Key facts about Nidoviruses:

- **Diverse group:** Nidoviruses include coronaviruses, toroviruses, arteriviruses, and roniviruses.
- **RNA-based:** Nidoviruses have a single-stranded RNA genome.
- **Positive-sense:** The RNA genome acts as messenger RNA (mRNA), directing protein synthesis.
- **Vertebrate hosts:** Nidoviruses infect a wide range of vertebrates, including mammals, birds, fish, and

reptiles.

- **Zoonotic potential:** Some nidoviruses can be transmitted from animals to humans, like coronaviruses (e.g., SARS-CoV-2).
- **Recombination:** Nidoviruses can undergo genetic recombination, leading to new variants and potentially increased virulence.
- **Spike protein:** Nidoviruses have a spike protein that helps them enter host cells.
- **Pathogenesis:** Nidoviruses can cause various diseases, including respiratory, gastrointestinal, and neurological disorders.
- **Evolution:** Nidoviruses are thought to have evolved from a common ancestor over 10,000 years ago.
- **Research:** Studying nidoviruses can provide insights into virus evolution, transmission, and pathogenesis, informing public health strategies.

Some notable nidoviruses include:

- Coronaviruses (e.g., SARS-CoV-2, MERS-CoV)
- Toroviruses (e.g., Berne virus)
- Arteriviruses (e.g., PRRSV)
- Roniviruses (e.g., Gill-associated virus)

Conclusion:

Crossbreeding of nidoviruses poses a significant threat to public and animal health, emphasizing the need for enhanced surveillance, research, and global cooperation to mitigate these risks.

Streptococcal Toxic Shock Syndrome

Why in News:

A highly fatal flesh eating bacteria has been recently discovered in Japan which can kill within just 48 hours of infection.

About Streptococcal toxic shock syndrome:

- Streptococcal toxic shock syndrome (STSS) is a rare but serious disease caused by the bacteria *Streptococcus pyogenes*. It starts with fever and throat infections but can rapidly escalate into a life-threatening emergency, leading to "toxic shock" and organ failure within days.
- According to the US Centers for Disease Control and Prevention (CDC), out of 10 people with STSS, up to three may die from the infection.

Factors behind STSS case rise are unclear:

- There are still many unknown factors about the mechanisms behind severe and sudden forms of

streptococcus, and hence they cannot yet be fully explained.

- STSS occurs worldwide at low levels, but a recent rise in cases in Japan has raised concerns among health experts about the potential spread to other countries.
- Currently, there is no indication that STSS is spreading beyond normal levels elsewhere. For example, in the US, the CDC has reported 395 cases so far this year, similar to the 390 cases reported at this time last year.

Fatality of STSS and treatment:

- Many individuals carry *Streptococcus pyogenes* on their skin without experiencing illness, but if the bacteria enter the bloodstream or deep tissue, they can cause serious STSS.
- This condition arises when the bacteria spread into deep tissues and the bloodstream, producing exotoxins that destroy cells and tissues, hence the term "flesh-eating bacteria." If the bacterial infection becomes uncontrolled, it can result in organ failure and be fatal.
- STSS is particularly dangerous due to the rapid onset of organ failure after infection. Following initial symptoms like fever, aches, and nausea, it takes only about 24 to 48 hours for low blood pressure to develop.
- STSS is typically treated in a hospital with antibiotics such as ampicillin. However, certain strains of *Streptococcus pyogenes* have exhibited antimicrobial resistance (AMR) to various antibiotic agents. To prevent further spread of the bacteria in the body, infected tissues can also be surgically removed.

Conclusion:

STSS is most common in older adults over 65 years old and in individuals with health conditions like diabetes or alcohol use disorders. Open wounds also increase the risk of STSS. Therefore, it is advised that individuals with recent surgeries or viral infections causing open sores (e.g., chickenpox or shingles) cover their wounds to reduce the risk of *Streptococcus pyogenes* infection. The CDC also recommends avoiding contact with individuals who have Group A strep infections and seeking treatment for them promptly.

H5N2 Bird Flu

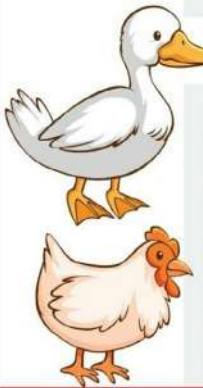
Why in News:

The World Health Organization recently confirmed the death of a 59-year-old man in Mexico caused by a strain of bird flu called H5N2, which was never recorded in humans before.

About Bird Flu:

- Bird flu, or Avian Influenza, is a viral infection that primarily affects birds. However, it is also a zoonotic disease, meaning it can spread from animals to humans. Certain subtypes of the virus can infect humans, leading to severe respiratory illnesses. The most notable of these subtypes is H5N1, which has been responsible for numerous human infections and fatalities in the past.
- Symptoms of avian influenza in humans are similar to those of regular flu and can include: Fever, cough, sore throat, muscle aches, and severe respiratory distress in advanced cases.

Influenza Type A Viruses



Subtypes

- Hemagglutinin (HA)
- Neuraminidase (NA)

(Viruses are divided into subtypes on the basis of two proteins on the surface of the virus)

<ul style="list-style-type: none"> ▪ 18 known HA subtypes 	<ul style="list-style-type: none"> ▪ 11 known NA subtypes
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Different combinations of HA and NA proteins are possible

- An H7N2 virus designates an influenza A virus subtype that has an HA7 protein and an NA2 protein
- H5N1 virus has an HA5 protein and an NA1 protein

All known subtypes of Influenza A viruses can infect birds, except subtypes H17N10 and H18N11, which have only been found in bats

Influenza A H5

- There are nine known subtypes of H5 viruses
- H5N1, H5N2, H5N3, H5N4, H5N5, H5N6, H5N7, H5N8, H5N9

Why the death of the man is a concern?

- The recent case in Mexico is particularly concerning because the victim had no known exposure to infected animals, indicating a potential shift in the virus's ability to infect humans without direct contact with poultry.
- The global nature of the poultry industry and international travel means that outbreaks can quickly become international public health emergencies.
- While human cases of avian influenza are rare, the potential for the virus to adapt and spread among humans is a serious public health concern. This suggests a new level of transmission or virulence of the virus not previously observed in the region.

Response by WHO:

The WHO has emphasized the need for heightened vigilance and preventive measures to reduce the risk of

infection. Key recommendations include:

- Avoiding contact with sick or dead birds.
- Ensuring poultry products are thoroughly cooked.
- Implementing robust surveillance systems to detect and Prompt response to new cases.

-: Prelims Insights :-

About Influenza:

- Influenza, an acute viral infection of the respiratory tract, is a life-threatening infectious disease caused by single-stranded RNA viruses. These viruses primarily target the columnar epithelial cells of the trachea, bronchi, and bronchioles.
- The infectivity of influenza virus particles depends on pH, temperature, salinity of water, and UV irradiation. Influenza is caused by three types of RNA viruses: influenza types A, B, and C, all belonging to the family Orthomyxoviridae. Commonly known as "flu," the disease in humans is generally caused by influenza A and B viruses.

Conclusion:

The Mexico case highlights the ongoing necessity for global health systems to stay vigilant against the threats posed by zoonotic diseases. It emphasizes the importance of having rapid response mechanisms in place to prevent widespread outbreaks, ensuring that health authorities can quickly identify, contain, and manage new cases to protect public health.

Methanol Poisoning

Why in News:

Many people have died after consuming spurious liquor which contained methanol in Kallakurichi district of Tamil Nadu. Methanol poisoning is extremely dangerous and can cause severe and potentially life-threatening health effects.

What is methanol poisoning?

- Methanol poisoning occurs when a person ingests, inhales, or is exposed to methanol, a toxic substance that can cause harmful health effects.
- Methanol is a type of alcohol that is commonly used in various industries, including fuel, solvents and feedstock.

Effect of methanol poisoning:

- **Blindness:** Methanol poisoning can cause permanent blindness by damaging the optic nerve. Even small amounts (10 mL of pure methanol) can cause blindness.
- **Kidney Failure:** Methanol poisoning can cause kidney failure and damage, leading to chronic kidney disease or even death.
- **Death:** The median lethal dose of methanol is 100 mL of pure methanol, which can be fatal when ingested. Death can occur within 1-3 days after ingestion.
- **Central Nervous System (CNS) Depression:** Methanol poisoning can cause CNS depression, leading to symptoms like vomiting, abdominal pain, decreased consciousness, poor coordination, and seizures.
- **Metabolic Acidosis:** Methanol poisoning can cause metabolic acidosis, a condition characterized by an imbalance in blood pH levels, leading to respiratory problems and cardiac arrest.
- **Respiratory Problems:** Methanol poisoning can cause respiratory problems, including pulmonary edema (fluid buildup in the lungs) and acute respiratory distress syndrome (ARDS).
- **Cardiovascular Problems:** Methanol poisoning can cause cardiovascular problems, including cardiac arrest, hypotension (low blood pressure), and tachycardia (rapid heart rate).
- **Other Symptoms:** Methanol poisoning can also cause other symptoms, such as headache, dizziness, confusion, and a specific smell on the breath (similar to ethanol).

About Methanol:

- Methanol, also known as methyl alcohol or wood alcohol, is a type of alcohol that is commonly used as a solvent, fuel, and feedstock in various industries.
- It is a colorless, volatile, and flammable liquid with a strong odor.

Methanol is used in various applications, including:

- **Fuel:** Methanol is used as a fuel in vehicles, either directly or as a blend with gasoline.
- **Solvent:** Methanol is used as a solvent in various industries, such as pharmaceuticals, paints, and adhesives.
- **Feedstock:** Methanol is used as a feedstock in the production of various chemicals, such as formaldehyde, acetic acid, and olefins.
- **Antifreeze:** Methanol is used as an antifreeze in automotive cooling systems.

- **Laboratory:** Methanol is used as a laboratory solvent and reagent.

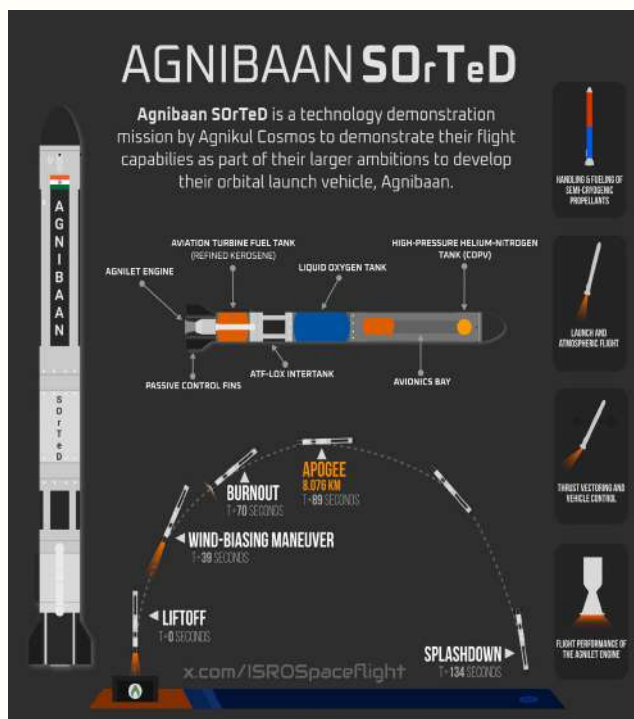
Agnibaan SOrTeD

Why in News:

IIT Madras' startup, Agnikul Cosmos, has launched the world's first rocket with a single-piece three-dimensional (3D) printed engine called Agnibaan SOrTeD (SubOrbital Technological Demonstrator).

About Agnibaan SOrTeD:

- The SOrTeD mission was initially scheduled for launch on April 7 but postponed due to technical glitches. It finally took off from India's first private launchpad, ALP-01, located at the Satish Dhawan Space Centre in Sriharikota. It was launched from India's first privately developed launchpad, 'Dhanush,' established by Agnikul at Sriharikota, Andhra Pradesh.



- The mission featured a 6.2-meter-tall single-stage launch vehicle with an elliptical nose cone and advanced avionics and autopilot software developed in-house.
- The Agnibaan SOrTeD is a two-stage rocket capable of carrying payload up to 300 kg to a height of 700

km, powered by liquid oxygen and kerosene. It can access both low- and high-inclination orbits and is fully mobile, designed for use at over 10 launch ports.

- It is India's first semi-cryogenic engine-powered rocket, entirely designed and manufactured indigenously.
- Unlike traditional sounding rockets that launch from guide rails, SOrTeD was designed to lift off vertically and follow a predetermined trajectory while performing a precisely orchestrated set of manoeuvres during flight.
- The test flight aims to demonstrate homegrown technologies, gather crucial flight data, and ensure the optimal functioning of systems for Agnikul's orbital launch vehicle, the 'Agnibaan.'

About IN-SPACe:

- The Indian National Space Promotion and Authorisation Centre (IN-SPACe) is an autonomous agency under the Department of Space (DOS) that enables private sector participation in space activities.
- It promotes, authorizes and supervises non-governmental entities in building launch vehicles, satellites, and providing space-based services. IN-SPACe also manages the sharing of DOS/ISRO infrastructure and the establishment of new facilities.
- As an interface between ISRO and private players, IN-SPACe optimizes the use of India's space resources and increases space-based activities. It assesses and accommodates the needs of private entities, including educational and research institutions, in consultation with ISRO.

Conclusion:

The successful launch of the Agnibaan SOrTeD marks a significant milestone for private players in India's space sector, particularly for Agnikul Cosmos. This achievement serves as a motivation for ISRO to continue supporting space startups and non-governmental entities, encouraging innovation and self-reliance to develop a robust space ecosystem. It will also motivate young innovators and entrepreneurs who are leading the transformation of India's space sector with cutting-edge technology, such as the world's first 3D printed semi-cryogenic engine. Their efforts are propelling India towards a leadership position in the global space arena.

Reverse Transcriptase

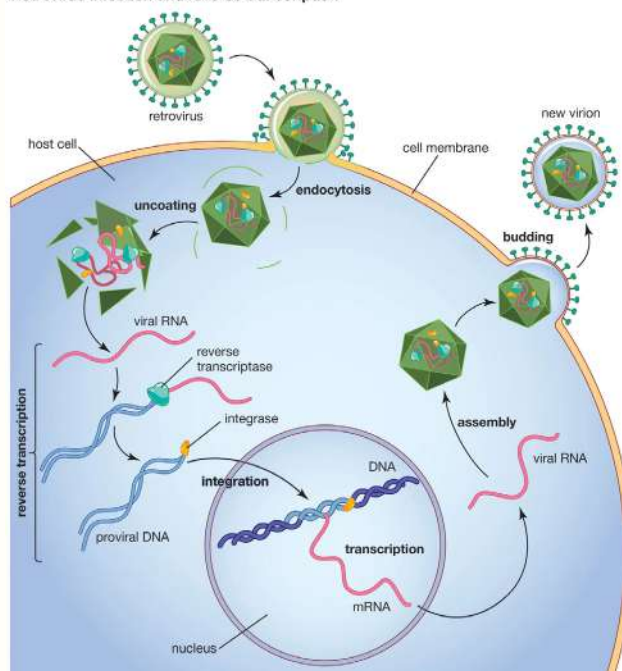
Why in News:

In a paper uploaded to the bioRxiv preprint server, researchers at Columbia University in New York, have found that the bacteria *Klebsiella pneumoniae* can create DNA to cope with infections.

What are the findings?

- When the bacteria *Klebsiella pneumoniae* is infected by bacteriophages, they use a non-coding RNA with specific motifs to bind to reverse transcriptase, instructing cells to create DNA. This DNA copy contains multiple copies of a gene that can create a specific protein.
- The researchers called this protein 'Neo' for "never-ending open-reading frame." Neo can put the bacterial cell into a suspended animation-like state, stopping its replication. This action also halts the replication of the invading bacteriophage, effectively stopping the infection.

Retrovirus infection and reverse transcription



What is Reverse Transcriptase?

- Reverse transcriptase was discovered by Howard Temin and David Baltimore in 1970, as published in the

journal Nature. Earlier it was believed that in all living beings, hereditary information flowed only from DNA to RNA and from RNA to protein (a.k.a. the 'Central Dogma').

- The subsequent discoveries however, showed that information could flow the other way, too, with RNA giving 'rise' to DNA, a process which was eventually termed as the Reverse Transcriptase.
- Reverse transcriptase was discovered independently by Howard Temin and David Baltimore in 1970, as published in the journal Nature.

:- Prelims Insights :-

- **Retroelements:** The human genome contains sequences called retroelements, believed to have originated from retroviruses, and hence termed retroelements. Evolutionary biologists suggest that these retroelements were transferred horizontally over millions of years of evolution.
- **Horizontal gene transfer:** It refers to genes 'jumping' between organisms rather than from parent to offspring.

Applications of Reverse Transcriptase:

Role in the COVID-19 Pandemic:

- During the COVID-19 pandemic, reverse transcriptase became crucial for diagnostic testing, serving as the gold standard for detecting the SARS-2 virus.
- This enzyme, alongside genome sequencing, also played a key role in tracking the virus's spread, enabling better public healthcare and vaccine development.

Impact on Research and Diagnostics:

- The discovery of reverse transcriptase revolutionized research methods in molecular biology.
- It enabled researchers to clone DNA from RNA and study gene functions. In diagnostics, reverse transcriptase was used to convert RNA to DNA to estimate viral material in samples.

Impact on HIV/AIDS Management:

- Reverse transcriptase played a crucial role in managing HIV infections in the 1980s.
- Antiviral agents targeting this enzyme helped convert HIV/AIDS from a deadly disease to a manageable condition, improving long-term outcomes and survival

rates.

Conclusion:

These recent discoveries highlight the potential of reverse transcriptase in bacterial defense against bacteriophages, with implications for biotechnology and medicine, particularly in combating antimicrobial resistance. Further exploration of reverse transcriptases could unveil novel genetic evolution mechanisms and viral resistance, offering new therapeutic and biotechnological possibilities.

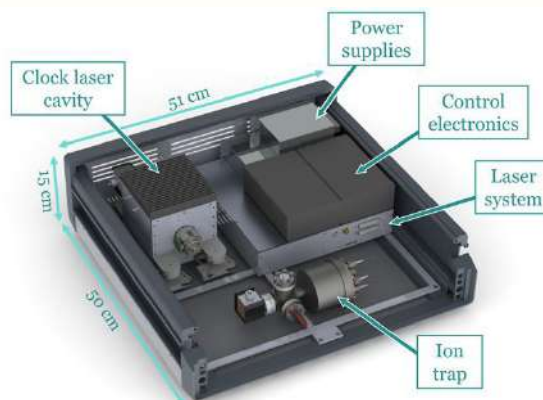
Portable Optical Atomic Clocks

Why in News:

A study published in the journal Nature introduced a portable optical atomic clock designed for use onboard ships. Although these devices do compromise some accuracy for increased portability and robustness, they remain more accurate than other timekeeping options available for maritime applications.

More about the News:

- Researchers in the Nature study developed a portable optical atomic clock using molecular iodine as the frequency standard.
- Traditional optical atomic clocks are large and hard to transport, but the team aimed to fit their clock into a standardized rack used in data centers, laboratories, and telecommunications facilities.
- To achieve this, they miniaturized the clock's spectrometer, laser system, and frequency comb. The final clock had a volume of 35 liters, about the size of a large backpack, weighed 26 kg, and consumed 85 W of power, slightly more than an incandescent light bulb.



About Atomic Clocks:

- Atomic clocks utilize a fundamental property of atoms:

their ability to jump between different energy levels. A common design uses Cs-133, an isotope of caesium. In 1967, the International Committee for Weights and Measures defined one second using Cs-133, a standard also used by India for timekeeping.

- Energy levels can be visualized as steps on a ladder. Atoms climb these steps by absorbing energy, such as electromagnetic radiation.

How Caesium Atomic Clock works?

- In a Cs atomic clock, the energy needed for the atom to jump to a higher level matches the frequency of microwave radiation, which is linked to the duration of a second. Researchers keep Cs atoms in a cavity and apply microwave radiation of a specific frequency. When this frequency matches the Cs atoms' transition energy, it creates a resonance.
- The Cs-133 atoms absorb this radiation and jump to a higher energy level only when the frequency is exactly 9,192,631,770 Hz. In other words, one second passes when the Cs-133 atom completes 9,192,631,770 oscillations.
- The clock's accuracy comes from a feedback mechanism that detects changes in resonance frequency and adjusts the radiation to maintain it, ensuring a caesium atomic clock loses or gains a second every 1.4 million years.

Optical atomic clocks:

- Optical atomic clocks are even more accurate. While they have the same working principle, the resonance frequency here is in the optical range. Radiation in this range includes visible light (to humans) and ultraviolet and infrared radiation.

Conclusion:

Atomic clocks are highly accurate, losing or gaining just one second over 300 million years, while optical atomic clocks achieve this over 300 billion years. The new iodine clock, though less accurate than optical atomic clocks, is mobile and robust, losing or gaining a second only in every 9.1 million years. These advancements are crucial for navigation, maritime communication, and scientific research. They can precisely monitor underwater seismic and volcanic activity. Onboard spacecraft, they assist in experiments testing the relativity theories and can potentially lower the cost of satellite-based navigation.

Earth CARE Mission

Why in News:

The EarthCARE satellite, a collaboration between the European Space Agency (ESA) and Japan's JAXA space agency, launched from Vandenberg air base in California. The EarthCARE satellite will probe the impact of clouds on climate.

Aim of the Mission:

- Clouds and aerosols play a crucial role in regulating Earth's energy balance, but their precise effects still remain one of the climate science's most significant sources of uncertainty.
- Clouds can reflect incoming solar radiation into space, thus cooling the planet and trap outgoing infrared radiation, thus warming it. The net effect depends on cloud height, thickness and microphysical properties, which must be adequately represented in current climate models.
- Aerosols, tiny suspended particles in the atmosphere, also influence the climate directly by absorbing and scattering radiation and indirectly by acting as cloud condensation nuclei. Changes in aerosol concentrations due to human activities can significantly alter regional cloud properties and precipitation patterns.
- This mission demonstrates the importance of international cooperation in the studying of Earth's climate and environment.

About EarthCAREs Satellite:

- The satellite carries four instruments (ATLID, CPR, MSI, BBR) to provide unprecedented 3D observations of clouds, aerosols, and radiation.
- Data from EarthCARE will improve weather forecasts, climate models, and our understanding of the Earth's energy balance.

Global Benefits of EarthCARE Mission:

- Improve early warning systems for severe weather events like hurricanes and floods.
- Help monitor and manage air quality and public health risks.
- Guide decision-making in agriculture, water management, and renewable energy.
- Track the impacts of climate change on our environment and communities.

Way Forward:

The intervening year have given the world a taste of the climate disasters which are yet to come. As a result, an added urgency drives the desire to resolve the uncertainties around clouds and upgrade the climate models, so that scientists can look out with finer eyes and predict the future well.



Economy

Corporate Social Responsibility in India: Possibilities and dimensions

There exists a profound interrelationship between development and justice, where each complements the other. Justice cannot be fully realized without development, and similarly, development lacks its essence without justice. In India, a welfare state, it is deemed essential to integrate the corporate sector with public welfare initiatives to uphold justice. Consequently, numerous large public sector undertakings in the country are actively initiating and funding social, cultural, and educational welfare schemes to align with public welfare objectives.

Recently, the Telangana government has actively encouraged the corporate sector to engage in social responsibility initiatives and increase their financial contributions. Meetings involving district collectors and senior bureaucrats have been convened to promote corporate social responsibility (CSR) activities across the state. Specifically, discussions have been held with executives from pharmaceutical companies to align their CSR efforts with government projects. Moreover, companies such as Reliance Group, Tata Steel, JSW, Hindustan Zinc, and SKF India have enhanced their financial commitments to CSR, particularly focusing on the sports sector in anticipation of the Paris Olympics.

- ❖ Reliance Industries has spent the most CSR on sports. Between FY 2019 and 2022, Reliance Industries has spent an average of Rs 41.6 crore per year on sports. Since India is also keen to host the Olympics in 2036, many Maharatna, Navratna, Miniratna companies have expressed their intention to increase spending on sports. Similarly, the Karnataka government is moving towards using CSR funds to further strengthen its health centers. In this way, efforts are being made to make development goals more participatory in India by promoting the use of CSR funds in every sector.
- ❖ In recent times, while the Archaeological Survey of India has launched the Adopt a Heritage 2.0 scheme by collecting CSR funds, companies like NTPC

and Larsen & Toubro have started spending on Environment Social Responsibility.

- ❖ National Thermal Power Corporation Limited (NTPC) Bongaigaon has also been recognized for its outstanding achievements in Corporate Social Responsibility (CSR) and environmental protection with two prestigious awards from Greentech Foundation. It was awarded the trophy in the Environment Protection category at the 22nd Annual Greentech Environment Awards 2023 and in the Rural Development category at the 10th Annual Greentech CSR India Awards.
- ❖ NTPC is focusing on the conservation of Olive Ridley Turtles, companies like Tata have invested CSR funds on tribes of Odisha for conservation of tribal heritage, paintings. CSR expenditures are being made by various companies in India for distribution of essential commodities to families living below the poverty line, education of children in tribal areas, promotion of tribal livelihood.

New CSR Initiatives of Coal India Limited (CIL):

- ❖ In March 2024, the Union Minister of Coal, Mines & Parliamentary Affairs, Government of India launched new Corporate Social Responsibility (CSR) initiatives by Coal India Limited (CIL) at an event hosted by the Ministry of Coal. One of these initiatives involves CIL enhancing its commitment to quality education by introducing Smart Classrooms in 70 Government

Schools. This builds upon a similar initiative launched earlier in 11 districts of Jharkhand on January 31, 2024. The project, valued at Rs. 2.42 crores, will be executed by EdCIL (India) Limited, a Miniratna PSU under the Government of India. The aim is to enhance student learning outcomes and bridge the digital divide between Government and Private Schools.

- ❖ A CSR scheme of CIL, Coal India Lok Seva Protsahan Yojana was also launched on the occasion. The scheme aims to provide financial assistance of Rs 1 lakh per person to SC/ST and female/third gender candidates of coal mining districts of Coal India Limited who qualify the preliminary examination of Civil Services/Forest Services examinations conducted by Union Public Services Commission (UPSC) during the year 2024 to 2026.
- ❖ The annual family income of the candidates availing the benefit under this scheme should be less than Rs 8 lakh. The application process will start after the result of Civil Services/Forest Services Preliminary Examination 2024 is declared by UPSC. The entire application process will be completed through a dedicated portal developed by Central Mine Planning and Design Institute Limited (CMPDI), a subsidiary of Coal India Limited, which was also launched on this occasion.

'Nanha Sa Dil' Project:

- ❖ The 'Nanha Sa Dil' project related to CSR activities has also been launched by the Coal Minister of India, which is a comprehensive initiative to make Congenital Heart Disease (CHD) surgery affordable to needy families. Currently, only 5% of the 2.40 lakh children born with CHD are able to undergo surgery due to the high cost. CHD accounts for one-third of all deaths due to congenital defects. As early detection of the disease can lead to better treatment, the project will screen around 18,000 children in 4 districts of Jharkhand through 176 villages/blocks and 16 district level camps. The surgery of children with confirmed disease will be financially supported under the project.
- ❖ The 'Nanha Sa Dil' project carries forward the legacy of CIL's unique flagship project 'Thalassemia Bal Sewa Yojana' which achieved a major milestone by performing 500 bone marrow transplants (BMT) during the event. Coal India Limited became the first PSU in the country to launch a CSR project to provide curative treatment for Thalassemia by supporting BMT operations in 2017. Financial assistance of Rs. 10 lakh is provided to eligible patients for bone marrow transplantation. To be eligible for this assistance, patients should fulfil

medical and age criteria as well as have an annual family income of less than Rs 8 lakh. The Rs 70 crore project is currently in its third phase. Currently, 11 major hospitals spread across the country are participating in the programme. The overall guiding structure for this has been provided by the Ministry of Health and Family Welfare, Government of India. Thalasseemics India, an NGO working in the field of thalassemia for the last 25 years, is the coordinating partner. The scheme has recently received the internationally renowned 'Green World Environment Award', declared in the CSR category in the "Fuel, Power and Energy" sector in January 2024.

- ❖ Coal India Limited is bringing happiness in the lives of needy people of the society through its CSR initiatives. One of the biggest corporate spenders in the country, along with its subsidiaries, has spent more than Rs 5,000 crore under CSR over a period of 9 years from FY 2014-15 to 2022-23. The thematic focus areas of the company include healthcare, hygiene and nutrition, education and livelihoods, rural development, promotion of sports, environmental protection and disaster management.

Legal Status of Corporate Social Responsibility in India:

- ❖ Corporate Social Responsibility in India has legal backing. The concept of CSR in India is governed by Section 135 of the Companies Act, 2013. India is the first country in the world to make CSR expenditure mandatory along with a framework to identify potential CSR activities.
- ❖ CSR provisions under the Companies Act, 2013 apply to companies having an annual turnover of Rs. 1,000 crore and above, or having a net worth of Rs. 500 crore and above, or having a net profit of Rs. 5 crore and above. The Companies Act requires companies to have a CSR Committee which will recommend a Corporate Social Responsibility policy to the Board of Directors and also monitor it from time to time. The Act encourages companies to spend 2% of their average net profit of the last three years on CSR activities.

Activities may be undertaken by a company under CSR:

These activities specified under Schedule VII of the Companies Act, 2013 include:

- ❖ Eliminating extreme hunger and poverty.
- ❖ Promoting education, gender equality and women empowerment.
- ❖ Combating HIV-AIDS and other diseases.

- ❖ Ensuring environmental sustainability.
- ❖ Contributing to the Prime Minister's National Relief Fund or any other fund set up by the Central

Government for socio-economic development and relief.

Short Issues

RBI's Annual Report 2023-24 on Millets

Why in News:

In its annual report on millets for 2023-24, the Reserve Bank of India has observed that the millet production in India has not seen significant growth in recent years.

Observation by RBI:

- The RBI's annual report for 2023-24 indicates that India is facing stagnation in both the acreage and production of millets. Although India accounts for almost 80 percent of Asia's and 20 percent of the global millet production, there has been little growth in recent years.
- The report attributes this stagnation to limited market demand, inadequate marketing infrastructure, and a lack of awareness about the nutritional benefits of millets among consumers.
- Additionally, the focus on high-yield cereal crops like rice and wheat has overshadowed the importance of millet cultivation.

Significance of Millets for Food Security in India:

- Millets are hardy and drought-resistant crops that are capable of growing in marginal soils and low-rainfall areas. This makes them a reliable food source and an ideal crop for farmers in challenging environmental conditions.
- They also play a crucial role in food security in India, especially for rural and economically disadvantaged populations. These highly nutritious grains can ensure food security in regions where other crops might not thrive due to harsh climatic conditions.

Government Initiatives to Promote Millets:

- National Food Security Mission (NFSM) to increase millet production and productivity, focusing on rainfed areas.

- **National Millet Museum:** This museum aims to raise awareness and understanding of millets. It is located in Hyderabad.
- **Price Support Scheme:** The government offers Minimum Support Price for millets to incentivize farmers to cultivate and sell these crops.
- **Seed Kit Distribution:** The government provides seed kits and other inputs to farmers to encourage millet cultivation.
- **Promotion of Millets in Public Distribution System:** To make them more accessible to the public and to ensure a stable market for the produce.
- **National Initiative on Millets:** To promote millet cultivation and increase its consumption.
- **Establishment of Millet Parks:** Various states have set up millet parks to boost millet production and processing.
- **Establishment of Nutri-Gardens:** Behavioral change campaigns are being implemented to boost consumer demand for nutritious grains.

Conclusion:

India's Millet Revolution is driven by growing awareness of millets' health and environmental benefits, efforts to revive traditional agricultural practices, and support for small-scale farmers. It addresses the dual challenges of improving public health and promoting sustainable agriculture. Increasing availability, accessibility, and affordability may boost consumption. Additionally, adequate public support and collaboration between farmers, processors, and marketers can help enhance the supply and demand for millets.

Global Gender Gap Index

Why in News:

The World Economic Forum has recently released its

Global Gender Gap Index underscoring the urgent need for a renewed global commitment to achieve gender parity, particularly in economic and political spheres.

Highlights of the Report:

- India has dropped two positions to 129th, while Iceland has maintained its top spot in the rankings. Iceland was followed by Finland, Norway, New Zealand and Sweden in the top five. The U.K. was ranked 14th, while the USA was at 43rd place.
- India is among the economies with the lowest economic parity levels, along with Bangladesh, Sudan, Iran, Pakistan, and Morocco. Each of these countries recorded less than 30% gender parity in estimated earned income.
- In South Asia, India was ranked fifth after Bangladesh, Nepal, Sri Lanka and Bhutan, while Pakistan was ranked last.
- However, India exhibited the best gender parity in secondary education enrolment and performed well in women's political empowerment, ranking 65th globally. For parity in the number of years with female/male heads of state over the past 50 years, India ranked 10th.

-: Prelims Insights :-

About World Economic Forum:

- WEF is an international not-for-profit organization, focused on bringing the public and private sectors together to address the global political, social, and economic issues.
- **Headquarter:** Geneva, Switzerland
- WEF regularly publishes globally recognized reports, including the Global Competitiveness Report and the Global Gender Gap Report, Energy Transition Index, Global Risk Report, Global Travel and Tourism Report.
- With a population exceeding 140 crore, India closed 64.1% of its gender gap in 2024. The WEF noted that India's economic parity score has trended upwards for the past four years.
- The drop from 127th place last year to 129th this year was mainly attributed to slight declines in 'Educational Attainment' and 'Political Empowerment,' while

'Economic Participation' and 'Opportunity' scores slightly improved.

- In the Political Empowerment subindex, India scored within the top-10 on the head-of-state indicator, but its scores for women's representation at the federal level, in Ministerial positions (6.9%) and in Parliament (17.2%), remains relatively low.

Conclusion:

The WEF stated that the world has closed 68.5% of the gender gap, but at the current pace, it will take another 134 years equivalent to five generations to achieve full gender parity. Since last year, the gender gap has closed by 0.1 percentage points. The report emphasized the urgent need for a renewed global commitment to achieve gender parity, particularly in economic and political spheres.

Consumption Expenditure Survey 2022-23

Why in News:

The Ministry of Statistics and Programme Implementation (MoSPI) recently released a detailed report on the Household Consumption Expenditure Survey (HCES) for 2022-23.

Highlights of the Survey:

- The National Sample Survey Office (NSSO), Ministry of Statistics & Programme Implementation (MoSPI), has been regularly conducting Household Consumption Expenditure surveys (HCES) since its establishment in 1950.

Rural food expenditure:

- In rural India, food makes up about 46% of household consumption spending. The contribution of 'beverages, refreshments and processed food' was the highest (9.62 per cent), followed by milk and milk products (8.33 per cent) and vegetables (5.38 per cent). The share of cereals and cereal substitutes in the consumption spending on food items was about 4.91 per cent.
- Milk and milk products' were preferred over 'beverages and processed food' in total food expenditure in rural areas for some states such as Rajasthan (35.5 per cent), Punjab (34.7 per cent), Gujarat (25.5 per cent), Uttar Pradesh (22.6 per cent) and Madhya Pradesh (21.5 per cent).

Rural Non-food Expenditures:

- In rural India, the highest share of monthly per capita

expenditure on 'conveyance' among non-food items was seen in Kerala (18.9 per cent), Tamil Nadu (18 per cent), Gujarat (16.6 per cent), Punjab (16.3 per cent) and Maharashtra (16 per cent).

- Medical expenses, which accounted for 13.3 per cent of the consumption expenditure among non-food items in rural areas, were seen to be the highest in Kerala (17.9 per cent), West Bengal (16.8 per cent) and Andhra Pradesh (16.6 per cent) as a percentage of the spending on non-food items.

Urban food expenditure:

- In urban India, the share of food in the average monthly per capita consumption expenditure (MPCE) for 2022-23 was approximately 39%.
- Urban areas also showed a high consumption spending on 'beverages, refreshments and processed food' with 10.64 per cent share followed by milk & milk products at 7.22 per cent and fruits and vegetables, each having a share of 3.8 per cent.

Urban Non-food Expenditures

- Among non-food items, households in urban areas spent the most on conveyance, followed by durable goods, miscellaneous goods, entertainment, medical expenses, and spending on fuel and light.
- In urban areas, Kerala (16.6 per cent), Tamil Nadu (16.1 per cent), Chhattisgarh (16 per cent), Gujarat (15.7 per cent) and Rajasthan (15.6 per cent) were among the states with the highest share on conveyance as a percentage of expenditure on non-food items.
- In urban India, West Bengal (15 per cent), Kerala (14.4 per cent) and Punjab (12.4 per cent) were among the states with the highest medical expenditure.

Conclusion:

Over the years, the consumption expenditure on non-food items has increased to over 50%. The HCES survey report shows rural average monthly consumption spending per person increased to Rs 3,773 in 2022-23 from Rs 1,430 in 2011-12, a 164% jump. In urban areas, the average monthly consumption expenditure per person rose by 146% to Rs 6,459 in 2022-23 from Rs 2,630 in 2011-12.

RBI's framework for Self-Regulatory Organizations

Why in News:

The Reserve Bank of India has recently released the framework for recognising self-regulatory organisations in

the financial technology sector (SRO-FT), encouraging entities to have a representative membership from the fintech sector.

Highlights of the Guidelines:

- **Structured Oversight Framework:** The guidelines highlight the importance of a structured oversight framework for SROs, based on activity, risk, and scale. This approach ensures that regulatory standards are applied consistently and effectively across the industry.
- **Key Responsibilities:** SROs have several key responsibilities, including:
 - » Establishing and enforcing regulatory standards
 - » Promoting ethical conduct
 - » Resolving disputes
 - » Fostering transparency and accountability among members
- **Representative Bodies:** The RBI emphasizes the need for SROs to be representative bodies, leveraging the collective expertise and experience of their members to develop pragmatic and widely accepted standards.
- **Membership:** The guidelines specify that SROs should have diversified shareholding, with no single entity holding more than 10% of its paid-up share capital. Additionally, fintech companies domiciled outside India may also be eligible for membership.
- **Addressing User Harm:** A crucial aspect of the guidelines is the requirement for SROs to address instances of 'user harm,' such as fraud, misselling and unauthorized transactions. SROs are expected to have mechanisms in place to manage and respond to such incidents promptly.
- **Oversight and Enforcement:** SROs are encouraged to establish structured frameworks for monitoring fintech activities and ensuring compliance with regulatory standards. Surveillance mechanisms should be deployed to detect exceptions, with a focus on maintaining confidentiality and collecting only essential information.
- **Consequences for Violations:** Consequences for violating agreed rules and codes may include counseling, cautioning, reprimanding, or even expulsion from the SRO. Monetary penalties, if imposed, should be reasonable and not overly punitive.

Conclusion:

These guidelines outline the framework within which Self-Regulatory Organizations (SROs) should operate,

emphasizing their role as development-oriented bodies and impartial mediators of disputes. According to the RBI, SROs in the fintech sector should be independent entities, free from external influence, and committed to upholding regulatory standards. They are expected to serve as repositories of information, encouraging members to adhere to established regulations while promoting ethical behavior and market integrity.

Trade Deficit of India

Why in News:

Recent official data shows that India has a trade deficit with 9 out of its top 10 trading partners, including China, Russia, Singapore, and South Korea in 2023-24. A trade deficit occurs when the value of a country's imports exceeds the value of its exports, with imports and exports referring both to physical goods and services.

Highlights of the data:

- India recorded a trade deficit with nine of its top ten trading partners in 2023-24, including China, Russia, Singapore, and Korea.
- The total trade deficit narrowed to \$238.3 billion in the last fiscal year from \$264.9 billion in the previous year.
- The deficit with China rose to \$85 billion, Russia to \$57.2 billion, Korea to \$14.71 billion, and Hong Kong to \$12.2 billion in 2023-24.
- China became India's largest trading partner with \$118.4 billion in two-way trade, surpassing the US.
- India had a trade surplus of \$36.74 billion with the US in 2023-24, and also with the UK, Belgium, Italy, France, and Bangladesh.
- India has a free trade agreement with four of its top trading partners - Singapore, the UAE, Korea, and Indonesia.

Reasons and impacts of India's trade deficit:

Reasons:

- Higher import values of crude and petroleum products, coal, coke and electronic goods.
- India relies on imports for more than 85% of its crude oil needs.
- Some Indian industries rely on imported raw materials.
- Lower exports of manufactured goods.
- India's volume of exported manufactured goods

falls short of imports due to lower manufacturing capabilities.

- Lower competitiveness in the global market compared to nations like China and the US.

Impacts:

- A higher trade deficit may weaken the Indian rupee against the dollar.
- Continuing trade deficits also eat into the country's balance of payments (BoP).
- Higher imports ensure the availability of a wider variety of goods and services to citizens.
- Currency depreciation results in benefits like preference of Indian exports due to more competitive prices.
- Trade deficit can encourage domestic businesses to invest in innovation and improve efficiency to compete with imported goods.
- Job creation in export-oriented sectors like packaging, shipping and logistics.

Conclusion:

Addressing India's trade deficit requires a nuanced and multi-faceted approach that considers various factors, including the specific trade partner, the nature of imports and exports, and the global economic climate. The Indian government must carefully evaluate the situation and implement a combination of strategies to effectively address the trade deficit and promote sustainable economic growth.

Cost Inflation Index

Why in News:

The Income Tax Department has notified the cost inflation index (CII) for the current fiscal to calculate long-term capital gains arising from the sale of immovable property, securities and jewellery. The CII is used by a taxpayer to compute gains arising out of the sale of capital assets after adjusting for inflation.

About Cost Inflation Index:

The Cost Inflation Index (CII) is a statistical measure used to adjust the cost of acquisition of an asset for inflation. It is used to calculate the long-term capital gains from the sale of assets, such as:

- Immovable property (real estate)
- Securities (stocks, mutual funds, etc.)
- Jewellery
- Artwork
- Other capital assets

The CII is a indexation mechanism that helps to:

- Adjust the purchase price of an asset for inflation.
- Calculate the long-term capital gains.
- Determine the tax liability on the sale of the asset.
- The CII is published annually by the Central Board of Direct Taxes (CBDT) and is used to calculate the indexed cost of acquisition, which is then used to calculate the long-term capital gains. First introduced in 1981.
- The index is revised annually to keep up with inflation, with the base year being periodically reset (currently the base year is 2001-02 in India).
- For example, if you purchased a property in 2010-11 for Rs 10 lakh and sold it in 2024-25 for Rs 20 lakh, the CII would be used to adjust the purchase price for inflation, say to Rs 15 lakh. The long-term capital gain would then be Rs 5 lakh (Rs 20 lakh - Rs 15 lakh).
- The CII is an important tool for taxpayers to calculate their tax liability on long-term capital gains and to claim exemption or deduction under various provisions of the Income-tax Act, 1961.

Global Debt Crises

Why in News:

Report released by the UN Trade and Development (UNCTAD) titled "A World of Debt 2024: A Growing Burden to Global Prosperity," has revealed an unprecedented global debt crisis in the world.

Highlights of the Report:

- **Debt:** The global public debt hit a record \$97 trillion in 2023, with developing countries accounting for about one-third of that amount (\$29 trillion).
- **Increase:** The global debt increased by \$5.6 trillion from the previous year, with developing countries' debt increasing from 16% of the global total in 2010 to nearly 30% in 2023.
- **Interest Payments:** Developing nations paid \$847 billion in net interest in 2023, a 26% increase from 2021. They borrowed internationally at rates two to four times higher than the U.S. and six to 12 times higher than Germany.
- **Crisis:** The crisis has intensified in Africa, where median public debt as a share of economic output has risen to 62%. The number of African countries with debt-to-GDP ratios above 60% has increased from 6 to 27 between 2013 and 2023.
- **Impact:** The debt burden is limiting countries' capacity

to fund essential public services such as healthcare, education, and climate initiatives. In 2023, a historic 54 developing nations dedicated a minimum of 10% of government funds to debt interest payments.

Initiatives related to solving the debt crisis:

- **Heavily Indebted Poor Countries (HIPC) Initiative:** This IMF initiative offers debt relief to the poorest countries in the world, freeing up resources for healthcare, education, and poverty reduction.
- **Debt Management and Financial Analysis System (DMFAS) Programme:** This UNCTAD program helps developing countries manage debt responsibly through training, technical support, and tools for recording debt and assessing risks.
- **Global Sovereign Debt Roundtable (GSDR):** This roundtable is co-chaired by the IMF and World Bank and aims to foster a greater common understanding among key stakeholders of issues related to debt sustainability and debt restructuring challenges.
- **G20 Common Framework for Debt Treatment:** This initiative provides structural support to low-income countries facing unsustainable debt burdens, with a coordinated and comprehensive approach to tackling debt challenges worsened by the Covid-19 pandemic.

Borrowing costs of developing countries are higher than those of developed ones

Bond yields of developing and developed countries (2020-2024)



About UNCTAD:

- Established in 1964 by the United Nations General Assembly.
- Composed of 195 member states.
- Headquarter: Geneva, Switzerland
- Reports to the General Assembly and the United Nations Economic and Social Council.
- Aims to promote the interests of developing countries

- in world trade.
- Works with non-governmental organizations worldwide.
 - Formulates policies relating to trade, aid, transport, finance, and technology.
 - Conceived and implemented the Generalized System of Preferences (GSP) to promote export of manufactured goods from developing countries.
 - Associated with the New International Economic Order (NIEO) which sought to reduce economic dependency and inequality between developing and developed countries.
 - Membership divided into four categories based on United Nations Regional Groups.
- expand job opportunities.
- Conducting upskilling and training programmes to enhance employability.
 - Providing comprehensive employment solutions, including accommodation at labour camps.
 - Ensuring medical and insurance coverage for all workers.
 - Implementing government-provided LINs for tracking migrant workers.
 - Facilitating the transition of informal workers into formal roles.
 - Engaging with industries and sectors with low formal employment uptake to encourage their participation in formalising their workforce through government support and guidance.

Conclusion:

The report calls for transformative changes to the financial architecture, advocating for a future where both people and the planet can thrive without the crippling weight of debt.

Informal Labor Market in India

Why in News:

The Indian Staffing Federation (ISF) in its report, India@ Work: Vision Next Decade,” has stated that India's informal sector has around 85% of its labour force is producing more than half of the country's GDP.

Key Strategies For Formalisation of the Report:

- It addresses the necessity of reducing employment bottlenecks and aligning skills with job opportunities.
- It emphasises the facilitation role of both industry and government, particularly in bridging the gap between marginalised workers and established employers. This involves establishing a robust conduit, managed by stakeholders, to facilitate entry into organisations with rigid entry barriers.
- It highlights the significance of policy changes, particularly regarding the implementation of labour codes, to streamline business operations and ensure worker protection and welfare through mechanisms like EPF and ESI.
- It also advocates for reduction in the GST rate on staffing services from 18 per cent to 5 per cent to incentivize formal employment.

Important Comprehensive Suggestions by ISF to Enhance Employment Mobility:

- Extending government protection schemes to approximately 5 crore domestic workers.
- Tapping into rural and semi-urban talent pools to

Way Forward:

The long-awaited “Lewisian transition” from a traditional to a modern economy in India has hardly taken place. A very large part of the population has been unable to reap the benefits of economic growth due to being excluded from the formal capitalist production-distribution processes. The informal sector has thus become a critical issue from the development perspective of the Global South.

World Investment Report 2024

Why in News:

The World Investment Report 2024 was published by the UN Conference on Trade and Development (UNCTAD).

Key points of the report:

- Insufficient funding is hindering efforts to achieve the 2030 Agenda for Sustainable Development.
- Foreign direct investment (FDI) fell by 2% to \$1.3 trillion in 2023 amid a global economic slowdown and rising geopolitical tensions.
- The decline in FDI exceeds 10% when excluding large swings in investment flows in a few European economies.
- Developing countries were the most affected by the decline in FDI.
- FDI flows to developing countries fell by 7% to \$867 billion in 2023.
- Greenfield investments rose in Asia, with a 44% increase in value and a 22% increase in the number of announcements.
- Overall foreign investment flow to Asia receded, falling from \$678 billion in 2022 to \$621 billion in 2023.

- The global economy is expected to grow at 3.2% in 2024 and 2025, steady but slow and differing by region.
- A slight acceleration is expected in advanced economies, offset by a modest slowdown in emerging market and developing economies.
- Global inflation is forecast to decline steadily, from 6.8% in 2023 to 5.9% in 2024 and 4.5% in 2025.

Reasons for Declining FDI Trend:

- **Economic uncertainty:** Higher interest rates and economic uncertainty led to a 9% decline in FDI flows to developing countries.
- **Geopolitical tensions:** Political tensions and trade restrictions impacted global investment flows.
- **Protectionist policies:** Increased protectionism in some countries reduced investment flows.
- **Regional realignments:** Changes in regional economic alliances and agreements affected investment patterns.
- **Crises:** Global crises, such as the COVID-19 pandemic, disrupted investment flows.
- **Supply chain diversification:** Efforts to diversify supply chains led some multinational enterprises to adopt a cautious approach to investment.
- **Industrial policies:** Changes in industrial policies and regulations in some countries impacted investment decisions.
- **Trade and geopolitical tensions:** Ongoing tensions and trade restrictions affected investment flows.
- **Weakening growth prospects:** Slowing economic growth in some regions made investors more cautious.

About UNCTAD:

- The United Nations Conference on Trade and Development (UNCTAD) was formed in 1964 by the United Nations General Assembly (UNGA) as a permanent intergovernmental body.
- Established on December 30, 1964.
- Formed to promote trade, investment and development in developing countries.
- Headquartered in Geneva, Switzerland.
- Composed of 195 member states.
- Reports to the UN General Assembly and the UN Economic and Social Council (ECOSOC).

Lessons to be learned:

- The report highlights the importance of business facilitation and digital government solutions in attracting investment by creating a transparent and

efficient environment. The suggested gradual approach to implementing digital government services is a practical way to start with basic business services and then expand to more areas.

Way Forward:

Investment facilitation is also crucial in simplifying processes for investors by providing easy access to information, promoting transparency, and streamlining administrative procedures. This approach can help reduce bureaucratic hurdles and make it easier for investors to do business, ultimately boosting investment and driving economic growth.

New Initiatives by Reserve Bank of India

Why in News:

Reserve Bank of India has launched three major initiatives: Pravaah portal, Retail Direct mobile app and a Fintech Repository.

About Pravaah portal:

- The PRAVAAH portal, launched by the Reserve Bank of India, is a digital interface designed to streamline the approval process under the Foreign Exchange Management Act (FEMA).
- It is a centralized, secure web-based platform that enables individuals or entities to apply online for regulatory approvals, licenses and authorizations directly from the RBI. This portal allows for direct digital communication with the RBI, eliminating the need for intermediaries such as authorized dealer banks.
- The portal covers 60 application forms across different regulatory and supervisory departments of the RBI, allowing applicants to track the status of their applications and receive decisions in a timely manner.

Key features of Pravaah portal

- Users can submit applications online directly through the portal.
- They can track and monitor the status of their application or reference.
- Users can respond to any clarifications or queries raised by the RBI regarding their application or reference.
- Receive decisions from the Reserve Bank within a specified timeframe.

-: Prelims Insights :-

Authorised Dealer bank:

- An Authorized Dealer bank is a financial institution authorized by a country's central bank to engage in foreign exchange transactions. These banks are essential for facilitating cross-border transactions, including both exports and imports.

About Retail Mobile App:

- The app provides retail investors with a seamless and convenient way to transact in government securities (G-Secs) on their smartphones. It simplifies the process of buying and selling G-Secs in both the primary and secondary markets.

About Fintech Repository:

- The repository aims to enhance the RBI's understanding of the Indian fintech sector by providing comprehensive data on fintech firms, both regulated and unregulated. It will support policymakers and industry participants by offering insights on fintech.
- Simultaneously, a related repository named EmTech Repository is being launched specifically for RBI-regulated entities (banks and NBFCs) to track their adoption of emerging technologies like AI, Machine Learning, Cloud Computing, DLT, Quantum, etc.
- Both the FinTech and EmTech Repositories are secure web-based applications managed by the Reserve Bank Innovation Hub (RBIH), a wholly owned subsidiary of RBI.

Conclusion:

The digitization of the approval process is part of the Finance Minister's initiative to enhance regulatory efficiency, which includes faster processing times, reduced bureaucracy and improved transparency in handling FEMA-related matters. These initiatives aim to enhance regulatory processes, facilitate retail investment and provide comprehensive data on the fintech sector.

Ruling on GAAR

Why in News:

The Telangana High Court has ruled against a taxpayer against whom the revenue department had invoked

General Anti-avoidance Rule (GAAR). This is the first and a landmark judgment on GAAR, seven years after it came into effect on April 1, 2017.

Key aspects of the judgement:

- The judgment sets a precedent for future cases and highlights the distinction between legitimate tax planning and colorable devices.
- The court's decision is seen as a significant shift in the Indian tax landscape, aiming to curb aggressive tax planning and ensure tax compliance.
- The taxpayer was not able to put forth any commercial justification for carrying out the transaction.
- The judgment serves as a reminder that GAAR is an all-encompassing safety net designed to capture colorable devices.
- GAAR empowers tax authorities to deny tax benefits on transactions or arrangements that have no commercial substance and whose only purpose is to avoid tax.
- The taxpayer had argued that since the transactions undertaken fell under chapter X of the Income Tax Act, 1961 (ITA), a specific anti-avoidance provision (SAAR), GAAR cannot be invoked.
- The court held that the arrangement was primarily designed to sidestep tax obligations, in direct contravention of the ITA principles, devoid of commercial substance, and should be perceived as a deliberate misuse of the ITA's provisions, going beyond the intended use of the law, and manipulating it to one's advantage.

About GAAR and SAAR:

- GAAR (General Anti-Avoidance Rules) and SAAR (Specific Anti-Avoidance Rules) are both anti-avoidance provisions in the Income Tax Act, 1961, aimed at preventing tax evasion through loopholes or aggressive tax planning.

GAAR:

- General in nature, applies to all transactions.
- Targets transactions lacking commercial substance or purpose.
- Empowers tax authorities to recharacterize or disregard transactions.
- Applies to all tax payers and transactions.

SAAR:

- Specific to particular sections or transactions.
- Targets specific tax avoidance strategies.
- Legislated to counter specific tax loopholes or abuses.

- Applies to specific taxpayers or transactions.

Key differences:

- GAAR is a broader, more comprehensive provision, while SAAR is narrower and targeted.
- GAAR focuses on the commercial substance of transactions, while SAAR focuses on specific tax avoidance strategies.
- GAAR is applied by tax authorities on a case-by-case basis, while SAAR is legislated and applied uniformly.

Conclusion:

The Telangana High Court's ruling on GAAR has significant implications for taxpayers and tax authorities in India. The ruling demonstrates that GAAR is a powerful tool in the hands of tax authorities to combat aggressive tax planning and ensure tax compliance. This ruling sets a precedent for future cases and clarifies the boundaries of legitimate tax planning in India.

New Corporate Governance Regulations for Insurers

Why in News:

Insurance Regulatory and Development Authority of India (IRDAI) have introduced new corporate governance regulations for insurers.

What are the new governance regulations?

- Seeking prior approval for the appointment of the board chairperson in insurance companies before competent authority.
- Ensuring an optimum composition of independent directors and non-executive directors, with a minimum of three independent directors.
- Ensuring the independence of the board from management and promoters.
- Ensuring compliance with environmental, social, and governance (ESG) requirements.
- Prohibiting conflicts of interest in key management positions, including the holding of both business and control functions by one person.
- Submitting annual reports on compliance with the regulations.
- Ensuring effective succession planning and whistleblower policies.

Applicability:

- The master circular is applicable to all insurers except foreign company engaged in re-insurance business through a branch established in India.
- IRDAI has given insurers time up to June 30, 2024 to ensure compliance with the provisions.

What is corporate governance?

- Corporate governance refers to the system of rules, practices, and processes by which a company is directed and controlled. It involves the relationships among the company's management, board of directors, shareholders, stakeholders, and the wider community. Good corporate governance ensures that a company is managed in a way that is transparent, accountable, and responsible, with the goal of creating long-term value for all stakeholders.

About IRDAI:

- The Insurance Regulatory and Development Authority of India (IRDAI) is a statutory and autonomous body that regulates and develops the insurance and reinsurance industries in India.
- IRDAI is a 10-member body consisting of a chairman, five full-time members and four part-time members appointed by the Indian government.
- IRDAI was established in 1999 by an act of parliament and is headquartered in Hyderabad.
- IRDAI aims to promote competition in the industry, increase consumer choice and lower prices, ensure the financial security of the insurance market and enforce the provisions of the Insurance Act.
- IRDAI has been continuously working to lessen the compliance burden on insurance companies.
- IRDAI has directed health insurance providers to develop specialized policies for senior citizens and establish dedicated channels for addressing their grievances and claims.
- IRDAI has removed the age limit for purchasing health insurance policies, which was previously 65 years.

Conclusion:

The new corporate governance regulations for insurers in India, as per the IRDAI (Corporate Governance for Insurers) Regulations, 2024, aim to strengthen the capacity of key stakeholders responsible for the insurer's governance and promote transparency, accountability, and protection of interests of stakeholders.

Miscellaneous

Central Government Targets Human Organ Trade in India

Human trafficking is a serious organized crime in India. Recently, the central government has alerted the states and union territories to take effective measures to stop the trade of human organs through websites and social media. The Ministry of Health and Family Welfare, Government of India has emphasized the need for strict action against those who buy and sell human organs for money under the Transplantation of Human Organ and Tissue Act, 1994.

The Ministry of Health and Family Welfare of India has identified websites and social media groups where money is offered for kidneys and other human organs, highlighting the need to dismantle such networks. Human trafficking, whether of humans or organs, violates fundamental human rights, including the right to life, health, and dignity.

Major cases of human trafficking:

- ❖ Recently, the CBI busted a major human trafficking network that was sending Indians to the Russia-Ukraine war zone under the guise of providing jobs abroad. The CBI conducted raids at over 10 locations across seven cities, detaining many individuals during the searches. Actions were taken in Delhi, Thiruvananthapuram, Mumbai, Ambala, Chandigarh, Madurai, and Chennai. Additionally, an FIR was registered against various visa consultancy firms and agents for sending youth to work in the Russia-Ukraine war zone under the pretense of lucrative jobs.
- ❖ The Crime Branch Sector 10 has also arrested YouTuber Bobby Kataria on charges of cheating and human trafficking by sending youths to another country in the name of jobs. Approximately one and a half hundred Indians, including women, were brought to Kataria's company through human trafficking. Bobby Kataria lured many people with the promise of jobs in abroad.
- ❖ As per the official definition by United Nations

Office of Drugs and Crime, Human Trafficking is the recruitment, transportation, transfer, harbouring or receipt of people through force, fraud or deception, with the aim of exploiting them for profit. Men, women and children of all ages and from all backgrounds can become victims of this crime, which occurs in every region of the world. The traffickers often use violence or fraudulent employment agencies and fake promises of education and job opportunities to trick and coerce their victims.

- ❖ In one such context, the Delhi High Court gave an important decision by rejecting the bail plea of the accused who raped a 12-year-old minor after bringing her to Delhi under the pretense of providing new clothes and mobile phones. The court stated that granting bail in a human trafficking case would send a wrong message to society. According to the petition, the accused had brought the victim from Jharkhand to Delhi.
- ❖ The case of human trafficking is increasing in different states of India. According to the NCRB report of 2023, Odisha was the most affected state by human trafficking in 2022, with more than 1100 cases registered. States like Maharashtra, Andhra Pradesh, Delhi, and Gujarat were also significantly affected. Child labor was found to be the main reason for human trafficking in these states. A case came to light from Kawardha district

of Chhattisgarh where 16 girls were taken to another city under the pretext of work. These girls arrived at Rajnandgaon railway station by bus and were waiting for a train there. The Railway Protection Force (RPF) noticed the girls and interrogated them, revealing that the case was related to human trafficking.

Illegal Purchase and Sale of Human Organs: An Organized Crime

- ❖ According to the US government's Congressional Research Service, the human organ trafficking market is called the "red market". According to an estimate by the NGO called Global Financial Integrity (GFI), the global human organ trafficking market is worth \$840 million to \$1.7 billion. According to GFI, every year 12,000 human organs are illegally transplanted in the world and 8000 of these are kidneys, followed by liver, heart, lungs and pancreas.
- ❖ Human organ trafficking usually takes place with the connivance of corrupt officials and criminal groups. It involves middlemen who prepare people to donate organs, talk to them for money and identify centers and medical professionals where human organs can be trafficked.

Organ Donation Methods in India:

- ❖ In India, there are two types of organ donation: cadaveric and live. Cadaveric donation involves the donation of organs from a brain-dead person, while live donation, under the Human Organ Transplant Act (HOTA), allows parents, children, spouses, and siblings to donate certain organs to each other. Distant relatives are generally not permitted to donate organs; however, a legal committee reviews petitions for exceptions in these cases.
- ❖ A crucial aspect of organ donation in India is HLA typing, a genetic matching process that confirms the relationship between donors and recipients. Unfortunately, there are instances of fraud in this system where racketeers use samples from genuine relatives but create fake documents to disguise organ smugglers as legitimate donors, violating guidelines.

About Human organ trafficking:

- ❖ According to the US government's Congressional Research Service, organ trafficking involves criminal activities where organs are illegally removed from living or deceased individuals and then illegally sold and transplanted. While some experts categorize captivity or coercion to obtain an organ as organ trafficking, the US government classifies this under human trafficking for organ extraction, which also includes human

rights violations. The global market for human organ trafficking is estimated at \$1.7 billion. International experts note that when the demand for organ transplants exceeds what is available through legal means, organ trafficking increases, attracting criminal elements.

- ❖ Human trafficking broadly encompasses many criminal activities beyond the illegal trade of human organs. One of the primary reasons for human trafficking is forced prostitution, where women or teenagers are exploited for commercial sex. Sex trafficking involves recruiting, harboring, transporting, providing, obtaining, protecting, or soliciting a person for a commercial sex act, induced by force, fraud, or coercion, or involving individuals under 18 years of age. Human trafficking also includes forced labor, child labor, bonded labor, forced beggary, forced marriage, and forced criminal activity. Terrorist organizations, such as ISIS, have promoted human trafficking to create sex slaves.

Measures to combat human trafficking:

Role of National Investigation Agency (NIA):

- ❖ In the year 2023, National Investigation Agency (NIA) had conducted searches in 10 states in connection with human trafficking cases. The states involved were Tripura, Assam, West Bengal, Karnataka, Tamil Nadu, Telangana, Haryana, Puducherry, Rajasthan, and Jammu & Kashmir. The raids targeted residential premises and other locations linked to suspects and were carried out in close coordination with state police forces.
- ❖ Under the National Investigation Agency Amendment Act, 2019, the NIA has been empowered to investigate, prosecute, file charge sheets, and punish culprits for crimes related to human trafficking through NIA Special Courts. As a result, the NIA is now actively raiding human trafficking gangs nationwide and arresting suspects. Since human trafficking is an organized crime, and the NIA has the authority to act against all major trafficking crimes under this category, it has become increasingly active in this area.
- ❖ In 2023 itself, an NIA team from Bengaluru had arrested an absconding accused from Tamil Nadu in the Sri Lankan human trafficking case. The NIA is also investigating other human trafficking cases where traffickers lure innocent people with false promises, including the possibility of obtaining valid documents for migration to Canada and securing employment opportunities, among other purposes.

National Organ Transplant Programme (NOTP):

- ❖ The Government of India has established a network of organ and tissue transplant organizations at the national, regional, and state levels, linking them with transplant and retrieval hospitals and tissue banks. To support this, the National Organ Transplant Programme (NOTP) has been implemented, maintaining a national registry of organ and tissue donors and recipients. The objective is to provide an efficient system for procuring and distributing organs and tissues from deceased donors.
- ❖ Under this programme, assistance is provided for establishing or upgrading organ and tissue transplant and retrieval facilities and setting up tissue banks. The Human Organ and Tissue Transplant Act (THOTA) of 1994 regulate the removal, storage, and transplantation of human organs and tissues for therapeutic purposes and prevents commercial transactions involving human organs and tissues. Notably, the Act does not regulate artificial organs.
- ❖ Apart from the above measures, anti-human trafficking cells, anti-human trafficking units, crime-multi-agency centres, active role of National Human Rights Commission and National Women Commission, activating intelligence agencies related to human trafficking etc. have been adopted. Strict provisions have been made in laws like Immoral Traffic Prevention Act, 1956, Criminal Law Amendment Act, 2013, POCSO Act, 2012 to prevent trafficking of women and children for commercial sexual exploitation and forced prostitution. Section 372 and 373 of IPC also prohibits buying and selling of girls for prostitution and makes it a punishable offence.

Short Issues

Food Poverty and the Situation of Children Around the World

Why in News:

Report titled 'Child Food Poverty: Nutrition Deprivation in Early Childhood' by the United Nations Children's Fund (UNICEF) observed that every fourth child in the world suffers from food poverty. This report highlights the lack of nutrition in children living in about 100 countries, along with its effects and causes.

Key points of the report:

- **Global situation:** There are 181 million children under the age of five in the world who are victims of food poverty, which represents one in every four children. 65% of these children live in only 20 countries, including India.
- **Situation of India:** According to the report around 76% children in India are facing food poverty.
- Of these, 40% children are suffering from severe food poverty and 36% children are suffering from moderate food poverty.
- **Impact of food poverty:** Children suffering from severe food poverty are 50% more likely to experience life-threatening malnutrition (wasting). Food poverty also adversely affects their mental and physical

development.

- **Major reasons:** Food poverty is caused by rising inflation, soaring food prices, increased living costs, climate change, the impact of pandemics, and growing conflicts. Additionally, the growing dominance of unhealthy foods and the failure of food systems contribute to the issue.

Examples of a poor diet:

- One of the prominent examples of food poverty can be seen in Afghanistan, where children often get only some bread or milk throughout the day, with fruits and vegetables being scarce on their plates.
- **Progress and success:** Countries such as Burkina Faso, Nepal, and Rwanda have reduced cases of food poverty through planned efforts to increase the supply of nutritious food.

Major recommendations by the Report:

- The report suggested emphasizing the provision of nutritious food for children and tackling poverty, along with strengthening health systems and focusing on sustainable development goals.

About Food Poverty:

- According to UNICEF, food poverty occurs when children do not have access to a healthy, nutritious, and diverse diet during their early years.

Classification of food poverty:

- If children are fed: 0–2 food groups/day they are living in severe child food poverty .
- If they are fed 3–4 food groups/day they are living in moderate child food poverty .
- If they are fed 5 or more food groups/day they are free from food poverty.

Conclusion:

Food poverty is a serious challenge to child development in India and across the world. Rising inflation, malnutrition, and the failure of food systems further complicate this problem. Collective efforts are needed to ensure the availability of healthy and nutritious food so that future generations can have a healthy and prosperous future.

Malnutrition and Stunting Among Hill Children

Why in News:

The problem of stunting and malnutrition is more severe among children living at higher altitudes in the hilly areas of India. This was recently confirmed by Indian researchers while conducting a study.

More about the News:

- This study was done by researchers associated with the International Institute of Population Sciences, Mumbai, University of Ladakh, Manipal Tata Medical College. The results of the study have been published in the international journal BMJ Nutrition Prevention and Health.

Major findings of the study:

- Children living at altitudes of 2000 metres or more above sea level have a 40% higher risk of being stunted.
- In the study 36% of the children that were studied were stunted.
- The problem of malnutrition was more common in children aged 18 to 59 months, with 41% of children in this age group being affected by stunting.
- The research also revealed that this link between height and stunting was more pronounced among children living in rural areas.
- The rate of stunting was more than double among children of illiterate mothers compared to those of mothers with higher education. 48% of children whose mothers had not gone to school were stunted, while this rate was 21% among educated women.

Major reasons:

- **Effects of altitude:** Lack of oxygen at high altitudes and harsh climatic conditions can cause a loss of appetite in children and limit nutrient absorption. This leads to stunted growth in children in these areas.
- **Nutritional deficiencies:** Food insecurity is higher in hilly areas as crop yields are low and availability of nutritious food is limited.
- **Lack of health services:** Access to health care is also more challenging in these areas, leaving children without adequate health services.
- **Lack of education:** The level of education of mothers also plays an important role in the nutrition of children. Lack of education leads to low awareness of nutrition and health.

Solutions and recommendations:

- **Expansion of nutrition programmes:** It is important to promote nutrition programmes in hilly and rural areas so that children can get adequate nutritious diet.
- **Increasing access to quality education:** Education should be made accessible to make mothers and families aware of nutrition and health.
- **Access to health services:** Concrete efforts should be made to increase access to health services in hilly areas.
- **Evidence-based policies:** It is important to promote evidence-based policies and focused efforts to combat malnutrition.

Steps taken by the Indian Government against malnutrition:

- Mission Poshan 2.0.
- Integrated Child Development Services (ICDS) Scheme.
- Pradhan Mantri Matru Vandana Yojana (PMMVY).
- Mid-Day Meal Scheme.

Conclusion:

To reduce stunting and malnutrition in India, a comprehensive and holistic approach is needed, integrating nutrition, health services, education and food security. Only through such an approach we can ensure the healthy growth of the country's children.

QS World University Rankings 2025

Why in News:

The Quacquarelli Symonds (QS) World University Rankings 2025 has indicated that 61 percent of Indian universities have improved their rankings.

Highlights of the report:

- The Indian Institute of Technology, Bombay has risen significantly from its 149th rank last year to 118th rank this year with an overall score of 56.3 out of 100.
- IIT Bombay is followed by IIT Delhi and the Indian Institute of Science (IISc), Bengaluru with the two institutes ranked second and third in India, respectively.
- The Indian Institute of Technology Kharagpur (IIT-KGP) has achieved the fourth spot ranking 271 in the 2024 rankings to 222 this time. IIT KGP is followed by IIT Madras which climbed 58 ranks (285 to 227) this year.
- One of the biggest improvements has been made by the University of Delhi (DU) which jumped 79 ranks from 407 last year to 328 this year. The central university has improved its rank from ninth last year to seventh this time.
- In this edition of the rankings, boasting 46 universities, the Indian Higher Education system is the seventh most represented globally and the third in Asia, trailing only Japan (49 universities) and China (Mainland) (71 universities).

Global rankings:

- MIT has secured the top rank in the latest rankings, followed by the UK's Imperial College London, which has improved its position from sixth to second.
- The third rank is jointly held by Harvard University, which climbed one rank, and the University of Oxford, which maintained its third-place position from last year.

Where India Lacks:

- **International Faculty and Student Ratios:** India lags in the International Faculty Ratio and International Student Ratio indicators, underscoring the need for greater international collaboration and exchange. The country's score for the proportion of international students is a mere 2.9, significantly below the global average of 26.5.
- **Proportion of International Faculty:** The average score for the proportion of international faculty in India is 9.3. This score reflects a lower presence of international faculty members compared to the global landscape.
- **Faculty/Student Ratio:** India's Faculty/Student ratio score of 16.2 is considerably lower than the global average of 28.1, indicating a potential strain on faculty resources and a need to improve the ratio to ensure better educational outcomes and personalized attention for students.

Conclusion:

As the rapid transformation brought about by the advancement of Artificial Intelligence continues, the global higher education landscape is evolving. The growing prominence of Indian higher education is evident, with 46 universities now ranked and 61% improving their positions. The bold implementation of India's National Education Policy (NEP) demonstrates the nation's commitment to modernising its education system, addressing challenges and leveraging opportunities.

Nata Pratha

Why in News:

The National Human Rights Commission (NHRC) has issued a notice to the Union Ministry of Women and Child Development and the States of Rajasthan, Madhya Pradesh, Uttar Pradesh, and Gujarat over a practice known as 'Nata Pratha'.

About Nata Pratha:

- Given the immoral consequences of 'Nata Pratha' on women and minor girls, the NHRC has called for its eradication and abolition.
- The word "Nata" means relationship and involves selling or marrying off underage girls on stamp paper, usually conducted by their own families.
- This practice is prevalent in parts of Rajasthan, Gujarat, and Madhya Pradesh, primarily among the Bhil tribe, one of South Asia's largest tribes.

Observations on 'Nata Pratha':

- **Enacting Legislation:** The commission recommended the enactment of specific laws to combat 'Nata Pratha' which clearly define and criminalize the practice and provide a legal framework for its eradication.
- Further, individuals involved in forcing women into 'Nata Pratha' should be prosecuted under existing human trafficking laws. The sale of minor girls should be prosecuted under the Protection of Children from Sexual Offences (POCSO) Act.
- **Village-Level Groups:** The commission suggested establishing groups at the village level to register cases of 'Nata Pratha.' These groups would act as watchdogs, ensuring that incidents are reported and addressed promptly.
- **Awareness and Education:** Building awareness about the detrimental effects of 'Nata Pratha' is crucial. Educational programs should be implemented to inform communities about the rights of women and

girls and the legal ramifications of engaging in such practices.

- **Economic and Social Empowerment:** Providing education and employment opportunities is essential to improving the economic and social status of girls and women. By empowering them, the cycle of exploitation and dependency associated with 'Nata Pratha' can be broken, leading to long-term societal change.

-: Prelims Insight :-

The National Human Rights Commission (NHRC):

- It is a statutory body in India, established under the provisions of the Protection of Human Rights Act of 1993. It is not a constitutional body.
- The Chairperson and the members of the National Human Rights Commission are appointed by the President on the recommendations of a six-member committee consisting of:
 - » The Prime Minister as its head.
 - » The Speaker of the Lok Sabha.
 - » The Deputy Chairman of the Rajya Sabha.
 - » The Leader of the Opposition in the Lok Sabha.
 - » The Leader of the Opposition in the Rajya Sabha.
 - » The Union Home Minister.
- The NHRC is vested with the power to regulate its own procedures and possesses all the powers of a Civil Court, giving its proceedings a judicial character. However, it can only investigate matters within one year of their occurrence.

About Bhils:

- The Bhil are one of the largest tribal groups, living in Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Andhra Pradesh and Rajasthan. The name is derived from the word 'billu', which means bow. They are known as excellent archers.

Case study:

- In a complaint dated July 15, 2020, a father from Rajasthan's Salamgarh area, Pratapgarh district, claimed his minor daughter was kidnapped. Her body was later

found in Danpur, Banswada district.

- An investigation revealed that the father had sold her in a marriage deal under the 'Nata Pratha' custom to a man for Rs. 2.5 lakh on July 11, 2019. The groom paid Rs. 60,000 upfront, with the remaining amount due by January 10, 2020. When the groom failed to pay the balance, the father retrieved his daughter and arranged another 'Nata' deal for Rs. 32,000.
- The girl, objecting, returned to her first husband in Gagarwa and complained to the Banswada SP about her father's repeated attempts to sell her and his threats to kill her. Despite her complaints, the police took no action, leading her to poison herself on June 16, 2020.

Conclusion:

'Nata Pratha' is comparable to modern forms of prostitution. This traditional practice involves the sale of women, often under the guise of marriage deals, which has severe implications for the rights and well-being of women and girls. There is urgent need to address this social evil through a multifaceted strategy as it violates basic human rights.

WIPO treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge

Why in News:

Members of Geneva-based World Intellectual Property Organization (WIPO) have concluded a treaty on Intellectual Property (IP), Genetic Resources (GRs), and Associated Traditional Knowledge (ATK).

The World Intellectual Property Organization:

- It serves as the global forum for Intellectual Property (IP) services, policy, information, and cooperation.
- As a self-funding agency of the United Nations, it has 193 member states. India is its member.
- Its mission is to lead the development of a balanced and effective international IP system that fosters innovation and creativity for the benefit of all.
- WIPO defines Traditional Knowledge (TK) as knowledge, know-how, skills, and practices that are developed, sustained, and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.

Impact of such treaty:

- By creating global standards on disclosure of origin

obligations, this treaty creates an unprecedented framework within the IP system for provider countries of genetic resources and associated traditional knowledge.

- Under the agreement it will be mandatory for patent applicants to disclose country of origin or source of genetic resources if the claimed invention is based on those materials or associated traditional knowledge.
- Through this treaty Global Intellectual Property (IP) system has acknowledged the invaluable contributions of traditional knowledge systems that have underpinned economies, societies, and cultures for centuries.
- This recognition signifies a crucial step towards acknowledging the intrinsic link between local communities and their Genetic Resources (GRs) and Associated Traditional Knowledge (ATK) within the global IP framework.
- **Implications of the Treaty:** The treaty will safeguard and protect biodiversity while increasing the transparency in the patent system and strengthening innovation.

Victory for India and the Global South:

- The treaty marks a significant win for India and the Global South, which has long been a proponent of this instrument. After two decades of negotiations and with collective support, this treaty has been adopted at the multilateral fora, with a consensus among more than 150 countries.
- The treaty, upon ratification and entry into force, will require contracting parties to put in place mandatory disclosure obligations for patent applicants to disclose the country of origin or source of the genetic resources when the claimed invention is based on genetic resources or associated traditional knowledge.
- This will offer added protection to Indian Genetic Resources and Traditional Knowledge, which, while currently protected in India, are prone to misappropriation in countries that do not have disclosure obligations.

Conclusion:

At present, only 35 countries have some form of disclosure obligations, but most are not mandatory and lack appropriate sanctions or remedies for effective implementation. This treaty will require contracting parties, including the developed world, to amend their existing legal frameworks to enforce disclosure of origin obligations on patent applicants. The treaty marks the beginning of a journey towards achieving collective growth and fulfilling the promise of a sustainable future, a cause that India has

championed for centuries.

Filoboletus Manipularis

Why in News:

A team of scientists and researchers have recently discovered a rare species of bioluminescent mushrooms, known scientifically as *Filoboletus manipularis* in the dense forests of Kasaragod, Kerala.

About *Filoboletus manipularis*:

- *Filoboletus manipularis* are mushrooms are unique for their ability to emit a bright green glow during the night. These mushrooms, also colloquially referred to as 'electric mushrooms,' have sparked interest due to their glowing property, which is not commonly found in terrestrial fungi.
- **Ideal habitat:** The Ranipuram forest, where these mushrooms were discovered, offers an ideal environment for their growth. The tropical, humid climate and plentiful decaying organic matter create perfect conditions for *Filoboletus manipularis*. The forest floor, covered in fallen leaves and branches, provides a nutrient-rich substrate for these fungi.
- **Presence of toxics:** Despite the allure of their luminous display, scientists have issued warnings against the consumption of these mushrooms. The chemicals responsible for their bioluminescence could potentially be toxic to humans, leading to severe gastrointestinal issues or other adverse health effects.



How bioluminescence works in fungi?

- Bioluminescence in mushrooms is a type of chemiluminescence, a chemical reaction that creates light. This process uses the pigment luciferin and the enzyme luciferase, with oxygen being essential.
- The light from these mushrooms is believed to attract

insects, which then help spread spores, aiding in the fungi's reproductive cycle.

-: Prelims Insight :-

About Kasaragod:

Situated in the rich biodiversity of Western Ghats, Kerala, Kasaragod forest is known for the Chandragiri and Bekal Forts, Chandragiri River, historic Kolathiri Rajas and natural environment of Ranipuram and Kottancheri Hills.

What is Bioluminescence?

- Bioluminescence is caused by marine plankton called dinoflagellates, which produce light when the water is disturbed. These plankton emit light on the ocean surface at night. Bioluminescence is common among deep-sea animals in general.
- Many marine creatures such as sponges, jellyfish, worms, various fish species, arthropods, echinoderms, and unicellular algae exhibit bioluminescence, using it to evade predators, attract prey or during mating.

Conclusion:

Bioluminescent mushrooms play an important role in breaking down organic matter and offer new opportunities for research. Studying their genes could help us learn more about bioluminescence and find new species, improving our understanding of fungal ecosystems. The discovery of *Filoboletus manipularis* shows that Kasaragod's forests have a diverse range of mushrooms. More research is needed to understand the full variety of mushrooms in the area. These findings suggest that there could be more discoveries to come, highlighting the region's rich biodiversity.

Raja Parb

Why in News:

President Droupadi Murmu recently attended the celebrations of Odisha's agricultural festival 'Raja Parb' at Rashtrapati Bhavan and witnessed various cultural performances.

About Raja Parb:

- The agricultural festival observed during the onset of monsoons, Raja Parb is one of the most celebrated festivals in Odisha. It is dedicated to Basu- Mata , the

Earth Goddess.

- The term 'Raja' comes from the word 'Rajaswala' (meaning a menstruating woman) and during the medieval period, the festival became more popular as an agricultural holiday remarking the worship of 'Bhudevi', wife of Lord Jagannath. A silver idol of Bhudevi is still found in Puri Temple aside Lord Jagannatha.
- The first, second and third days of Raja Parb are called 'Pahili Rajo', 'Mithuna Sankranti', and 'Bhu Daaha' or 'Basi Raja', respectively.
- It is believed that the Goddess Earth or the divine wife of Lord Vishnu undergoes menstruation during the first three days of this festival. The fourth day is called Vasumati Gadhua, which marks the ceremonial bath of Bhudevi.
- As long as the festival goes, no agricultural activity like ploughing or sowing takes place for it is believed that Mother Earth goes through rejuvenation during these three days.

-: Prelims Insight :-

- Greek geographer Ptolemy, in his renowned book "Geographika", mentions the existence of Sambalpur in the second century AD under the name 'Sambalaka' on the banks of the River Mahananda. These names correspond to the modern Sambalpur and Mahanadi.
- In French traveler Taverner's travelogues, 'Sumelpur' is described as a diamond-rich region supplying the Roman Empire, which refers to present-day Sambalpur.

About Mayurbhanj Chhau dance, Sambalpuri dance and Karma dance:

- **Mayurbhanj Chhau dance:** Chhau is a semi-classical Indian dance that blends martial and folk traditions. It exists in three styles, named after their regions: Purulia Chhau in West Bengal, Seraikella Chhau in Jharkhand, and Mayurbhanj Chhau in Odisha. Masks are a key feature of the Purulia and Seraikella styles.
- **Sambalpuri dance:** It is folkloric dance form, originating from western Odisha, particularly the former Sambalpur district, is known for its sculptural Odissi dance. Deriving its name from the presiding

deity 'Samalai', Sambalpur boasts a distinct cultural identity.

- **Karma dance:** Meaning 'fate' in Kosli Odia, this pastoral Sambalpuri folk dance is performed to worship the god or goddess of fate (Karam Devta or Karamsani Devi). Starting from Bhadra Shukla Ekadasi this dance is popular among scheduled class tribes such as the Binjhal, Kharia, Kisan, and Kol in the districts of Balangir, Kalahandi, Sundargarh, Sambalpur, and Mayurbhanj.

Conclusion:

Odisha's vibrant culture and historical legacy are represented by the Raja Parba Festival. This important celebration honors fertility, womanhood, and the beginning of the monsoon season, reflecting the state's deep cultural values and traditions.

UNHCR on Global Displaced Population

Why in News:

The United Nations Refugee Agency UNHCR has recently released its Annual Forced Displacement Report highlighting the numbers of displaced population around the Globe.

Highlights of the Report:

- At the end of 2023, an estimated 117.3 million people worldwide were forcibly displaced due to persecution, conflict, violence, human rights violations and events seriously disturbing the public order.
- Based on operational data, UNHCR estimates that forced displacement has continued to increase in the first four months of 2024 and by the end of April 2024 is likely to have exceeded 120 million. Consequently, one out of every 69 people on Earth is now displaced.
- Sixty-eight millions of those are internally displaced within their own countries. The rest are refugees in need of protection (43.4 million) and people who are seeking asylum (6.9 million), according to the annual displacement report by the Office of the United Nations High Commissioner for Refugees (UNHCR).
- As of 2024, almost three-quarters (72 percent) of all refugees came from just five countries: Afghanistan (6.4 million), Syria (6.4 million), Venezuela (6.1 million), Ukraine (6 million) and Palestine (6 million).
- Under international law, refugees are people who are forced to flee their home countries to escape persecution or a serious threat to their life, physical

integrity or freedom.

Driving reasons behind Forced Displacements:

- New and ongoing conflicts have driven forced displacement across the globe. Conflict in Sudan broke out in April 2023, causing one of the largest humanitarian and displacement crises in the world. More than 6 million people were displaced within the country, with a further 1.2 million fleeing to neighbouring countries.
- In Myanmar, escalating violence following the military takeover in February 2021, displaced more than 1.3 million people within the country in 2023. While in the State of Palestine, UNRWA estimates that between October and December 2023, up to 1.7 million people (or over 75 per cent of the population) were displaced by the conflict in the Gaza Strip, with some forced to flee multiple times.

Major Countries providing refuge:

- Almost 70 percent of refugees and others in need of international protection live in countries next to their countries of origin.
- Globally, the largest refugee populations are hosted by Iran (3.8 million), Turkey (3.3 million), Colombia (2.9 million), Germany (2.6 million) and Pakistan (2 million).
- Nearly all refugees in Iran and Pakistan are Afghans while most refugees in Turkey are Syrians.
- In the past decade, refugee numbers have increased in these major host countries except for Turkey, where numbers have dropped by 14 percent since 2021.
- Germany is the only major host country that does not border the main refugee source countries. Most refugees in Germany at the end of 2023 were from Ukraine (1.1 million), Syria (705,800), Afghanistan (255,100) and Iraq (146,500).

Preventing an Arms Race in Outer Space

Why in News:

BRICS ministers have recently reaffirmed their commitment to ensuring the long-term sustainability of outer space activities and preventing an arms race in outer space and its weaponisation.

More about the News:

- During the BRICS meeting, the Ministers reiterated their support for ensuring the long-term sustainability of activities in outer space and for preventing an arms

- race and its weaponization.
- They highlighted the significance of the provisions related to the Prevention of an Arms Race in Outer Space (PAROS) in the Outer Space Treaty (OST) and called for discussions on a legal multilateral instrument for PAROS.
- The Ministers acknowledged the submission of the updated Draft Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects to the Conference on Disarmament in 2014.
- They emphasized that practical, non-binding, and voluntary commitments such as Transparency and Confidence-Building Measures (TCBMs) could also contribute to PAROS.

About Outer Space Treaty:

- The concept of preventing an arms race in outer space originated in the 1950s when the United Nations (UN) first considered proposals to prohibit the use of space for military purposes and the placement of weapons of mass destruction in space.
- The Outer Space Treaty of 1967 states that outer space should be dedicated exclusively to peaceful purposes. India became a party to the Outer Space Treaty by ratifying it in 1982.
- The treaty prohibits the placement of nuclear weapons or any other type of weapons of mass destruction in Earth's orbit and prohibits the stationing of weapons on celestial bodies. Despite these provisions, the treaty does not directly prevent an arms race in space, prompting ongoing discussions and proposals for a more comprehensive treaty.
- In 2008, Russia and China presented a draft treaty to the Conference on Disarmament (CD) aimed at preventing the placement of weapons in outer space and banning the use of anti-satellite weapons. This draft was revised in 2014 but has not been adopted.

About PAROS:

- The Prevention of an Arms Race in Outer Space is a United Nations resolution that calls for a ban on the weaponization of space, originating during the Cold War. This resolution recognizes the shortcomings of the Outer Space Treaty in preventing an arms race in outer space.
- However, negotiations for the treaty in the UN General Assembly have been hindered by opposition from the United States.

Conclusion:

The PAROS treaty aims to expand on the OST by

prohibiting any nation from placing objects carrying weapons in Earth's orbit or on celestial bodies. It also seeks to ban the threat or use of force against objects in outer space. A significant challenge in negotiating the treaty is defining what constitutes a weapon in space. The United States argues that the inability to clearly define space weapons is a primary barrier to such a treaty. Additionally, there are debates over where outer space begins, what types of weapons should be prohibited, and whether the treaty would be verifiable.

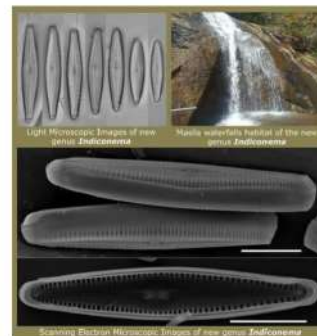
Indiconema, a New Diatom Genus

Why in News:

Researchers from the Agharkar Research Institute, Pune have discovered a new genus of the Gomphonemoid diatom in the pristine waters of the Eastern Ghats.

About the new genus:

- This newly identified genus, named *Indiconema*, is distinguished by unique valve features, including symmetry and the presence of pore fields at both the head and foot poles. The genus name reflects its limited distribution within India, emphasizing the country's rich and unique biodiversity.



- There are two species of *Indiconema*: one from the Eastern Ghats and another from the Western Ghats.
- *Indiconema* has been found to be closely related to *Afrocymbella*, a diatom genus endemic to East Africa. This finding supports earlier observations of similarities between diatom species in India, East Africa, and Madagascar. The evolutionary link between these regions underscores the importance of monsoons and varying wetness in shaping diatom flora across the Indian Peninsula.

About diatom species:

- Diatoms, microscopic algae essential to aquatic ecosystems, produce around 25% of the global oxygen supply and serve as a fundamental component of the aquatic food chain.
- Their sensitivity to changes in water chemistry makes

them excellent indicators of water quality. The discovery of Indiconema highlights the critical role diatoms play in maintaining ecological balance and biodiversity.

Features of diatom species:

- **Diverse group:** Diatoms are a diverse group of algae, with over 20,000 known species.
- **Unique cell walls:** Diatoms have cell walls made of silica (SiO₂), which are ornately patterned and play a crucial role in their classification.
- **Photosynthetic:** Diatoms are photosynthetic, producing their own food using sunlight.
- **Aquatic habitats:** Diatoms are found in almost every aquatic environment, from freshwater lakes and rivers to oceans and wetlands.
- **Food source:** Diatoms are a crucial food source for many animals, from small zooplankton to large whales.
- **Important indicators:** Diatoms are used as indicators of water quality, as they are sensitive to changes in their environment.
- **Fossil record:** Diatoms have a rich fossil record, with evidence showing they've been on Earth for over 180 million years.
- **Industrial applications:** Diatoms are used in various industries, including water filtration, biomedicine, cosmetics, and food and beverages.
- **Ecological role:** Diatoms play a vital role in the aquatic food chain and are a key component of the global carbon cycle.

Conclusion:

The discovery of Indiconema not only enriches our knowledge of diatom diversity but also highlights the critical importance of protecting and studying India's unique and varied habitats.

Nalanda University

Why in News:

Prime Minister Narendra Modi inaugurated the new campus of Nalanda University in Rajgir, Bihar, near the site of the ancient ruins of the historic Nalanda University.

Detail about revival of university:

- Revival of the Nalanda University was first proposed in the early 2000s by former President A.P.J. Abdul Kalam, Singapore government and leaders of East Asian Summit (EAS) countries.
- Indian Parliament passed the Nalanda University Act in 2010 to provide a legal framework for the institution.

- Nalanda University is a joint effort between India and East Asian nations to promote regional knowledge exchange.
- Bihar government provided a 455-acre site for the university near the ancient ruins.
- The university offers postgraduate programs in various fields, including Buddhist Studies, Historical Studies, Ecology and Environmental Studies, and International Relations.
- The campus is designed to be eco-friendly and sustainable, with a solar plant, water treatment plant, water recycling plant, and other environmentally friendly facilities.
- The campus is a 'Net Zero' Green Campus, and is self-sustainable.
- The ruins of Nalanda University were declared a UN Heritage Site in 2016.

About Nalanda University:

- **Ancient Center of Learning:** Nalanda University was an ancient center of learning and one of the oldest universities in the world.
- **Founded in 427 CE:** It was founded in 427 CE by Kumaragupta I, a Gupta Empire ruler.
- **Buddhist Studies:** Nalanda was a major center of Buddhist learning and scholarship, attracting students from across Asia.
- **Nine Million Books:** The university had an vast library with over nine million books, making it one of the largest collections in the ancient world.
- **International Student Body:** Students from Korea, Japan, China, Tibet, Indonesia, Persia, and Turkey studied at Nalanda.
- **Multi-Disciplinary Curriculum:** The university offered courses in subjects like philosophy, logic, medicine, astronomy, mathematics, and art.
- **Famous Alumni:** Nalanda alumni include the renowned Buddhist scholars Nagarjuna and Padmasambhava.
- **Destruction by Muslim Invaders:** Nalanda was destroyed by Muslim invaders led by Bakhtiyar Khalji in 1197 CE, marking the end of ancient India's golden era of learning.
- **Archaeological Significance:** The Nalanda ruins are now a UNESCO World Heritage Site and a major archaeological attraction.

Conclusion:

The revival of Nalanda University is a significant milestone in the preservation and promotion of ancient Indian knowledge and culture. The new university, established in 2010, is a symbol of India's rich educational heritage and its ability to adapt to modern times. The campus, designed by renowned architect B.V. Doshi, is a blend of traditional and modern architecture, reflecting the spirit of the past while incorporating modern amenities.

National Institute of Indian Medical Heritage

Why in News:

World Health Organization has designated the National Institute of Indian Medical Heritage (NIIMH), Hyderabad, as a WHO Collaborating Centre (CC) for “Fundamental and Literary Research in Traditional Medicine” (CC IND-177). This designation was granted for a period of four years, starting from June 3, 2024. The NIIMH is the third WHO-CC in the domain of traditional medicine, following the Institute for Teaching and Research in Ayurveda, Jamnagar, and the Morarji Desai National Institute of Yoga (MDNIY), New Delhi.

Benefits to NIIMH:

- Global recognition and validation of NIIMH's expertise in traditional medicine research.
- Enhanced collaboration and knowledge sharing with international experts and organizations.
- Strengthening of traditional medicine research and education in India.
- Development of international standards and terminologies for traditional medicine practices.
- Increased visibility and credibility for NIIMH and India's traditional medicine heritage.
- Opportunities for joint research projects and publications with international partners.
- Capacity building and training for researchers and practitioners in traditional medicine.
- Contribution to the development of evidence-based traditional medicine practices.
- Enhanced integration of traditional medicine into modern healthcare systems.

About WHO Collaborating Centre:

A WHO Collaborating Centre (CC) is an institution designated by the World Health Organization (WHO) to

collaborate on specific areas of work. There are over 800 WHO CCs worldwide, working on various topics such as:

- Infectious diseases
- Non-communicable diseases
- Mental health
- Nutrition
- Environmental health
- Health technologies
- Traditional medicine

Functions of WHO Collaborating Centres:

- Conduct research and development.
- Provide technical assistance and training.
- Support WHO's global health agenda.
- Foster international collaboration.
- Disseminate knowledge and expertise.
- Support evidence-based decision-making.
- Contribute to global health security.

About National Institute of Indian Medical Heritage (NIIMH):

- Founded in 1956 as National Center of Indian Medical Heritage (NCIMH).
- Located in Dilsuknagar, Hyderabad.
- Operates under Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH.
- Dedicated to medico-historical research in traditional and modern medicine.
- Extensive collection of research materials on History of Medicine, accessible globally.
- Supplies resource materials for historians, scientists, and researchers in AYUSH and Modern Medicine.
- Only institution of its kind in Southeast Asia for medico-historical research.
- Houses over 500 physical manuscripts and rare books dating back to 15th century.
- Designated as WHO Collaborating Centre (CC) for traditional medicine research.
- Publishes Journal of Indian Medical Heritage and develops international terminologies for Ayurveda, Siddha, and Unani.

Conclusion:

By leveraging the CC's expertise and resources, the global community can harness the benefits of traditional medicine to improve healthcare outcomes, promote cultural understanding, and advance scientific discovery.

BRAIN BOOSTERS

Green Ammonia

Why in Broadcast

Solar Energy Corporation of India (SECI) has issued a Request for Selection (RfS) of Green Ammonia producers under SIGHT Programme of the National Green Hydrogen Mission (NGHM). RfS will be done through competitive bidding. The bidding will be done through e-bidding and e-Reverse Auction for a total of 5.39 lakh Metric Tonnes (MT)/annum of Green Ammonia intended for production and supply. The produced green ammonia will be supplied to fertilizer companies.

4. Goals of NGHM

- ❖ Production of at least 5 million metric tons of green hydrogen annually by 2030.
- ❖ Associated renewable energy capacity addition of 125 GW by 2030.
- ❖ Creation of over 600,000 jobs by 2030.
- ❖ Attraction of investments totaling over \$100 billion by 2030.
- ❖ Reduction of fossil fuel imports by over \$12.7 billion by 2030.
- ❖ Abatement of nearly 50 million metric tons of annual greenhouse gas emissions by 2030.

1. About green ammonia

- ❖ Green ammonia is a type of ammonia that is produced using renewable energy sources, such as wind or solar power, instead of traditional fossil fuels.
- ❖ This makes it a more sustainable and environmentally friendly alternative to conventional ammonia.
- ❖ Ammonia is a chemical compound made up of nitrogen and hydrogen, and it has various industrial applications, including:
 - » **Fertilizer production:** Ammonia is a key ingredient in the production of fertilizers, which are essential for agriculture.
 - » **Energy storage:** Ammonia can be used as a carrier for hydrogen, making it a potential player in the transition to a low-carbon energy sector.
 - » **Industrial processes:** Ammonia is used in various industrial processes, such as the production of plastics, dyes, and pharmaceuticals.

2. Benefits of Green Ammonia

- ❖ **Reduced greenhouse gas emissions:** Green ammonia has the potential to reduce greenhouse gas emissions and support various industries in achieving a more sustainable future.
- ❖ **Zero-emission fuel:** When used as a fuel, green ammonia releases only water and nitrogen upon combustion, making it an attractive option for various sectors.
- ❖ **Sustainable fertilizer:** Green ammonia can be used in agriculture as a sustainable fertilizer.
- ❖ **Fuel for shipping and aviation:** Green ammonia can be used as a fuel for shipping, aviation, and other transportation sectors.

3. About National Green Hydrogen Mission

- ❖ Launched in January 2023.
- ❖ Aim: To make India a global hub for production, use and export of green hydrogen.

5. Conclusion

Green Ammonia will contribute to India's goal of becoming Aatmanirbhar (self-reliant) through clean energy in fertiliser sector and serve as an inspiration for the global clean energy transition.

BRAIN BOOSTERS

World Narcotic Day

Why in Broadcast

World Narcotic Day, also known as the International Day Against Drug Abuse and Illicit Trafficking, was observed on June 26. The day is observed to raise awareness about the global drug problem, with the ultimate goal of creating a society free of drug abuse.

5. International Treaties & Conventions to Combat Drug Menace

- ❖ United Nations(UN) Convention on Narcotic Drugs (1961)
- ❖ UN Convention on Psychotropic Substances (1971)
- ❖ UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988)
- ❖ UN Convention against Transnational Organized Crime (UNTOC) 2000.

- ❖ **National Action Plan for Drug Demand Reduction, 2018:** It focuses on preventive education, awareness generation, identification, counseling, treatment and rehabilitation.
- ❖ **National Fund for Control of Drug Abuse:** It created for meeting the expenditure incurred in measures taken for combating illicit trafficking, controlling abuse of drugs and substances, identifying, treating, and rehabilitating addicts.
- ❖ **Nasha Mukta Bharat Campaign, 2020:** It was launched to tackle the issue of substance abuse and to make India drug free.

1. Theme

- ❖ The theme of World Narcotic Day 2024: "The evidence is clear: invest in prevention".

2. History

- ❖ In 1909, an international conference on narcotic drugs was held in Shanghai, where the global problem of drug abuse was officially recognized.
- ❖ The United Nations General Assembly established World Drug Day in December 1987.
- ❖ It is observed annually on 26 June, since 1989.
- ❖ The UN General Assembly chose June 26 to commemorate Lin Zexu's efforts to dismantle the opium trade in Guangdong, China.
- ❖ June 26 also coincides with the signing of the Convention on Psychotropic Substances in 1971.

3. Three Drug Control Conventions of UN

Single Convention on Narcotic Drugs (1961):

- ❖ This convention consolidated existing drug control treaties and established the International Narcotics Control Board (INCB).
- ❖ It also categorized drugs into four schedules based on their potential for abuse and medical usefulness.

Convention on Psychotropic Substances (1971):

- ❖ This convention extended international drug control to psychotropic substances, such as stimulants, depressants, and hallucinogens.
- ❖ It also established controls on the production, trade, and use of these substances.

United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988):

- ❖ This convention aimed to combat drug trafficking and organized crime.
- ❖ It introduced measures to prevent money laundering, asset forfeiture, and extradition of drug offenders.

4. Measures to Combat Drug Addiction in India

- ❖ **The Narcotic Drugs and Psychotropic Substances Act (NDPS), 1985:** It prohibits a person from producing, possessing, selling, purchasing, transporting, storing, and/or consuming any narcotic drug or psychotropic substance.

BRAIN BOOSTERS

Reusable Launch Vehicle (RLV)

Why in Broadcast

Indian Space Research Organisation (ISRO) conducted the third and final Reusable Launch Vehicle Landing Experiment (RLV LEX) of the Reusable Launch Vehicle (RLV) named 'Pushpak'.

4. About ISRO

- ❖ **Mission:** To harness space technology for India and the greater good of humanity.
- ❖ **Headquarter:** Bengaluru
- ❖ **Year of Establishment:** 1969
- ❖ **Predecessor:** Indian National Committee for Space Research (INCOSPAR)
- ❖ **Parent Organisation:** Department of Space (DOS), Government of India.
- ❖ **Objective:** Develop and apply space technology for various national needs.

- ❖ **Support sustainable space exploration:** Reusability aligns with the principles of sustainability, reducing waste and minimizing the environmental impact of space exploration.
- ❖ **Enable new business models:** Reusability opens up opportunities for satellite servicing, space tourism, and other commercial applications.
- ❖ **Strengthen space capabilities:** RLVs can enhance a country's space capabilities, providing a strategic advantage in space exploration and development.

1. About RLV LEX

- ❖ The RLV LEX-03 mission was conducted at the Aeronautical Test Range (ATR) in Chitradurga, Karnataka.
- ❖ The vehicle was released from an Indian Air Force Chinook Helicopter at an altitude of 4.5 km.
- ❖ The vehicle landed at a velocity exceeding 320 km/h.
- ❖ The mission aims to develop a fully reusable launch vehicle that could reduce the cost of accessing space.

2. About Reusable Launch Vehicle (RLV)

- ❖ ISRO has developed the Reusable Launch Vehicle as a spaceplane with the ability to return to Earth after launching satellites.
- ❖ The RLV is designed for vertical takeoff and horizontal landing (VTHL) on a runway.
- ❖ The RLV uses a fully reusable single-stage-to-orbit (SSTO) vehicle, incorporating several major elements such as the X-33 advanced technology demonstrator, the X-34 testbed technology demonstrator and the upgraded DC-XA flight demonstrator.
- ❖ The RLV is being developed to provide low-cost access to space and to enable India to launch its own satellites without relying on foreign launch vehicles.
- ❖ The RLV has undergone several successful tests, including the RLV-TD (Technology Demonstrator) in 2016 and the RLV-LEX (Reusable Launch Vehicle - Landing Experiment) in 2023 and 2024.
- ❖ The RLV is expected to play a crucial role in India's space program, enabling the country to launch its own satellites and reduce its dependence on foreign launch vehicles.

3. Importance of a Reusable Launch Vehicle

- ❖ **Reduce space launch costs:** By reusing the launch vehicle, the cost of launching payloads into space can be significantly reduced.
- ❖ **Increase launch frequency:** RLVs can launch payloads more frequently, making them ideal for satellite constellations and other high-demand applications.
- ❖ **Enhance reliability:** RLVs can be designed with redundant systems, improving overall reliability and reducing the risk of launch failures.

Global Gender Gap Report

Why in Broadcast

Global Gender Gap Report 2024 has been released by the World Economic Forum (WEF) which has evaluated the status of Gender Parity across 146 countries. This is the 17th edition of the report.

4. About Global Gender Gap Report

- ❖ The Global Gender Gap Report is an annual report published by the World Economic Forum (WEF) that measures the gender gap in various countries around the world.
- ❖ The report assesses the gap between men and women in four main areas:
 - » **Health and Survival:** Life expectancy, infant mortality, and sex ratio at birth.
 - » **Educational Attainment:** Access to education, literacy rates, and gender parity in schools.
 - » **Economic Participation and Opportunity:** Labor force participation, income, and gender parity in the workforce.
 - » **Political Empowerment:** Representation in politics, government, and decision-making positions.
- ❖ The report provides a score for each country, ranging from 0 (complete inequality) to 1 (complete equality).
- ❖ The scores are then used to rank countries in terms of their gender gap.

1. Key Findings of the Report

- ❖ The global gender gap score in 2024 stands at 68.5%, improving by a mere 0.1 percentage point from last year.
- ❖ It would take 134 years to reach full gender parity, equivalent to five generations beyond the 2030 target.
- ❖ 97% of the economies have closed more than 60% of the gender gap, up from 85% in 2006.
- ❖ Of the 146 countries, 50.1% of economies reported increases in their score, while 43.8% reported negative changes.
- ❖ The top 10 countries are Iceland, Finland, Norway, New Zealand, Sweden, Nicaragua, Germany, Namibia, Ireland and Spain.
- ❖ Although no country has achieved full gender parity, the top nine countries have closed up to 80% of their gap.
- ❖ The global health and survival gender gap has been bridged by 96%, education by 94.9%, economic participation by 60.5%, and political empowerment by 22.5%.
- ❖ The economic participation and opportunity parameter reached its highest gender parity score to date at 60.5%.
- ❖ The political empowerment subindex shows virtually no progress since last year, with a score of 22.8%.
- ❖ Women hold only 42% of the global workforce and represent just 31.7% of senior leadership positions.

2. Finding with Respect to India

- ❖ India ranks at 129 out of 146 countries in the Global Gender Gap Report 2024.
- ❖ The country's overall gender gap score is 64.1%.

3. India Performed Across the Four Indices

- ❖ **Health and Survival:** India is the worst performer in the world in this index, ranking 146.
- ❖ **Economic Participation and Opportunity:** India ranks 143 out of 146, with a score of 39.8%.
- ❖ **Educational Attainment:** India ranks 107.
- ❖ **Political Empowerment:** India ranks 48.

Fourth International Conference on Small Island Developing States

Why in Broadcast

The fourth International Conference on Small Island Developing States (SIDS4) was held at St John's, Antigua and Barbuda. The conference aimed to assist Small Island Developing States (SIDS) in building sustainable, climate-resilient economies and societies. Theme: "Charting the Course Toward Resilient Prosperity"

5. Initiatives for Small Island Developing States (SIDS)

- ❖ **Infrastructure for Resilient Island States (IRIS):** Launched by Indian Prime Minister Narendra Modi in 2021, this initiative aims to develop the infrastructure of small island nations.
- ❖ **Coalition for Disaster Resilient Infrastructure (CDRI):** This initiative aims to build capacity and conduct pilot projects in small island developing states.
- ❖ **Blue and Green Islands Integrated Program:** A new \$135 million program launched by UNDP and UNEP.

4. Key Points

- ❖ SIDS face multiple crises, including climate change, COVID-19, and debt.
- ❖ The pandemic severely impacted SIDS, especially those dependent on tourism.
- ❖ Climate action is urgent, with weather-related disasters doubling in two decades.
- ❖ SIDS are vulnerable and least responsible for climate change.
- ❖ There is a need for blended finance to bridge the financing gap for SDG- and nature-positive businesses.
- ❖ There are 39 countries and territories that are officially recognized as SIDS by the United Nations.

1. Outcome

- ❖ The "Antigua and Barbuda Agenda for SIDS: A Renewed Declaration for Resilient Prosperity" was adopted.
- ❖ World leaders pledged to support SIDS in achieving their priorities over the next 10 years.

2. Other commitment

- ❖ Antigua and Barbuda launched a Center of Excellence for SIDS and Debt Sustainability Support Service.
- ❖ The United States announced its commitment to scale-up international public climate finance to over USD 11 billion annually by 2024, quadrupling the previous level.
- ❖ The EU pledged to mobilize EUR 300 billion in public and private investments by 2027 to involve the private sector in sustainable development through its Global Gateway investment strategy, with several initiatives underway in SIDS.
- ❖ Barbados announced the launch of a UN Industrial Development Organization (UNIDO)-Barbados Global SIDS Hub for Sustainable Development.
- ❖ UNDP announced a new \$135 million Blue and Green Islands Integrated Program, launched jointly with UNEP.
- ❖ The Green Climate Fund presented its "50by30" vision to manage USD 50 billion by 2030 and the Fund's efforts to strengthen the network of entities it collaborates with to better enable countries to put forward ambitious programs.

3. Participants

- ❖ Heads of States and Governments.
- ❖ Delegates from the United Nations system and civil society.

BRAIN BOOSTERS

Lok Sabha Speaker

Why in Broadcast

BJP leader Om Birla was re-elected as Speaker of the Lok Sabha for the 18th session. Birla won against INDIA bloc's candidate K Suresh during the voice vote. He is serving as a Member of Parliament, Lok Sabha from Kota constituency in Rajasthan.

3. Key Pointers

- ❖ **First Speaker:** Ganesh Vasudev Mavalankar (1952-1956)
- ❖ **First Woman Speaker:** Meira Kumar (2009-2014)
- ❖ **First Speaker to be elected for a second term:** M. A. Ayyangar (1956-1962)
- ❖ **First Speaker to be elected for a second non-consecutive term:** N. Sanjiva Reddy (1967-1969 and 1977)
- ❖ **First Speaker to die in office:** G.M.C. Balayogi (1998-2002)
- ❖ **Longest-serving Speaker:** Balram Jakhar (1980-1989)
- ❖ **Shortest-serving Speaker:** Hukam Singh (1962-1967)
- ❖ **Oldest Speaker:** Somnath Chatterjee (2004-2009)
- ❖ **Youngest Speaker:** Om Birla (2019-present)

- ❖ **Granting Permission:** The Speaker grants permission to members to raise matters of public importance. The Speaker decides whether a bill is a money bill or not.
- ❖ **Suspending Members:** The Speaker can suspend members for disrupting the proceedings of the House.

1. Constitutional Provisions Related to Speaker

- ❖ **Article 93:** The House of the People shall, as soon may be, choose two members of the House to be respectively Speaker and Deputy Speaker.
- ❖ **Article 94:** Speaker must be a member of the House. There are no specific qualifications required for a member to stand for Speaker election.
- ❖ The Speaker remains in position throughout the life of the Lok Sabha unless they resign in writing to the Deputy Speaker, cease to be a member of the Lok Sabha or are dismissed by a motion approved by a majority of all Lok Sabha members.
- ❖ The Speaker may attend the meeting but shall not preside when the House is considering a resolution to remove the Speaker.
- ❖ In the absence of a quorum, the speaker has the authority to adjourn the House or postpone a session.

2. Powers of Speaker

- ❖ **Presiding Officer:** The Speaker presides over the proceedings of the House and maintains order and discipline.
- ❖ **Interpretation of Rules:** The Speaker interprets the Rules of Procedure and Conduct of Business in the House.
- ❖ **Deciding Matters of Privilege:** The Speaker decides matters related to the privileges of members.
- ❖ **Admitting Motions:** The Speaker admits or disallows motions moved by members.
- ❖ **Putting Questions:** The Speaker puts questions to the House for decision.
- ❖ **Casting Vote:** The Speaker can cast a vote in case of a tie.
- ❖ **Maintaining Order:** The Speaker maintains order in the House and can punish members for unruly behavior.
- ❖ **Appointing Committees:** The Speaker appoints members to committees and nominates their chairpersons.
- ❖ **Signing Bills:** The Speaker signs bills passed by the House before they are sent to the President for assent.
- ❖ **Representing the House:** The Speaker represents the House in various matters and ensures its dignity and prestige are maintained.
- ❖ **Conduct of Business:** The Speaker decides the business of the House and allocates time for different items.

BRAIN BOOSTERS

Monsoon

Why in Broadcast

According to the Indian Meteorological Department, the Southwest Monsoon reached the Kerala coast aarrived two days earlier than its typical onset date of June 1. The sluggish pace of the monsoon has hit India's rainfall deficit, which has dropped 19% below the long-period average this June.

7. Effects of El Niño and La Niña on the Indian Monsoon

El Niño:

- ❖ Suppresses monsoon rainfall.
- ❖ Leads to droughts and water scarcity.
- ❖ Reduces crop yields and agricultural productivity.
- ❖ Increases likelihood of wildfires and heatwaves.
- ❖ Typically associated with a weaker monsoon season.

La Niña:

- ❖ Enhances monsoon rainfall.
- ❖ Leads to floods and heavy rainfall events.
- ❖ Boosts crop yields and agricultural productivity.
- ❖ Reduces likelihood of wildfires and heatwaves.
- ❖ Typically associated with a stronger monsoon season.

6. Regional Variations

- ❖ **Northeast India:** Receives highest rainfall, with some areas receiving over 1,000 mm.
- ❖ **Western India:** Receives relatively low rainfall, with some areas receiving less than 500 mm.
- ❖ **Eastern India:** Receives moderate rainfall.
- ❖ **Southern India:** Receives rainfall during the northeast monsoon (October to December).

1. Definition of Monsoon

A monsoon is a seasonal change in the direction of the prevailing, or strongest, winds of a region. Monsoons cause wet and dry seasons throughout much of the tropics. Monsoons are most often associated with the Indian Ocean.

2. Introduction of Monsoon

- ❖ India receives 80% of its annual rainfall during the monsoon season.
- ❖ The southwest monsoon starts around the first week of June and lasts until September.
- ❖ The retreating monsoon, or the Northeast monsoon, sets in during the cooler months, from October to November.

3. Causes of Monsoon in India

- ❖ Temperature difference between land and sea.
- ❖ Topography of the Indian subcontinent.
- ❖ Global wind patterns.
- ❖ Intertropical Convergence Zone (ITCZ).

4. Stages of Monsoon in India

- ❖ **Onset:** Monsoon arrives in Kerala in June, marking the beginning of the southwest monsoon.
- ❖ **Progress:** Monsoon advances northwards, covering entire India by July.
- ❖ **Peak:** Monsoon rainfall is highest in July and August.
- ❖ **Withdrawal:** Monsoon starts retreating in September, marking the end of the southwest monsoon.

5. Impact of Monsoon on India

- ❖ **Agriculture:** Monsoon is crucial for agriculture, with many crops relying on monsoon rainfall.
- ❖ **Water Resources:** Monsoon replenishes water resources, including reservoirs and groundwater.
- ❖ **Economy:** Monsoon has a significant impact on India's economy, with a good monsoon season boosting economic growth.
- ❖ **Culture:** Monsoon has cultural and religious significance in India, celebrated in various festivals.

Economic Recovery and Economic Curve

Why in Broadcast

According to researchers at HSBC, an uneven K-shaped recovery in economic growth is also fuelling a similar trajectory for inflationary dynamics in India, with food and rural price rise outpacing the inflation in other goods and services, and that faced by urban consumers, respectively.

3. Types of Economic Curve

- ❖ **Supply Curve:** Shows the relationship between the price of a good and the quantity supplied.
- ❖ **Demand Curve:** Shows the relationship between the price of a good and the quantity demanded.
- ❖ **Laffer Curve:** Shows the relationship between tax rates and government revenue.
- ❖ **Phillips Curve:** Shows the tradeoff between unemployment and inflation.
- ❖ **Lorenz Curve:** Shows the distribution of wealth or income in a population.
- ❖ **Kuznets Curve:** Shows the relationship between economic growth and income inequality.
- ❖ **Environmental Kuznets Curve:** Shows the relationship between economic growth and environmental degradation.
- ❖ **J-Curve:** Shows the short-term deterioration in trade balance after a depreciation of the currency.
- ❖ **S-Curve:** Shows the slow initial growth, followed by rapid growth, and finally slow growth again, often seen in technological adoption.
- ❖ **Gini Coefficient Curve:** Measures income inequality, with 0 representing perfect equality and 1 representing perfect inequality.

1. Types of Inflation Curves

- ❖ **Demand-pull inflation:** Occurs when aggregate demand exceeds the available supply of goods and services, driving up prices.
- ❖ **Cost-push inflation:** Results from increased production costs, such as higher wages or raw materials costs, leading to higher prices.
- ❖ **Built-in inflation:** Expectations of future price increases lead to higher prices today, creating a self-fulfilling prophecy.
- ❖ **Hyperinflation:** Extremely high and accelerating inflation, often caused by monetary policy mistakes or political instability.
- ❖ **Stagflation:** Combination of high inflation and stagnant economic growth, often accompanied by high unemployment.
- ❖ **Reflation:** A temporary increase in inflation following a period of deflation or low inflation, often due to monetary policy changes.
- ❖ **Disinflation:** A slowdown in the rate of inflation, not a decrease in prices.
- ❖ **Deflation:** A sustained decrease in general price levels, often indicating economic contraction.
- ❖ **K-shaped inflation:** Uneven inflation, where certain sectors or groups experience higher inflation rates than others.

2. Types of Economic Recovery

- ❖ **V-shaped recovery:** A rapid and strong recovery, resembling a "V" shape, where the economy quickly returns to its pre-recession state.
- ❖ **U-shaped recovery:** A slower and more gradual recovery, resembling a "U" shape, where the economy takes time to recover.
- ❖ **W-shaped recovery:** A double-dip recession, where the economy experiences a second downturn after a brief recovery.
- ❖ **L-shaped recovery:** A prolonged and slow recovery, resembling an "L" shape, where the economy remains stagnant for an extended period.
- ❖ **K-shaped recovery:** A recovery where different segments of the economy recover at different rates, resembling a "K" shape.
- ❖ **J-shaped recovery:** A recovery where the economy experiences a sharp decline, followed by a strong and rapid recovery, resembling a "J" shape.
- ❖ **Square-root shaped recovery:** A recovery where the economy experiences a sharp decline, followed by a slow and gradual recovery.

BRAIN BOOSTERS

Hike in MSP

Why in Broadcast

On June 19, 2024, the Union Cabinet chaired by Prime Minister Shri Narendra Modi approved the increase in the Minimum Support Prices (MSP) for all mandated Kharif Crops for Marketing Season 2024-25. The highest absolute increase in MSP over the previous year has been recommended for oilseeds and pulses.

7. Other aspect of MSP

- ❖ The MSP system was first introduced in the 1960s to provide a safety net to farmers by guaranteeing them a minimum price for their produce.
- ❖ Agriculture is a state subject, but price control falls under the concurrent list, so the Union Government is competent to legislate on the subject.
- ❖ The MS Swaminathan Commission has recommended that the Minimum Support Price (MSP) should be based on the C2+50% formula, which includes the imputed cost of capital and rent on land, to give farmers a 50% return on their investment.

6. Benefits

- ❖ **Income Security:** Guarantees a minimum price for crops, ensuring a basic income for farmers.
- ❖ **Price Stability:** Reduces price volatility, providing a stable market environment.
- ❖ **Increased Production:** Encourages farmers to produce more, leading to increased foodgrain production.

1. What is MSP?

- ❖ MSP stands for Minimum Support Price.
- ❖ It is the minimum price that the government of India guarantees to pay to farmers for their crops, to ensure a minimum return on their investment and to protect them from any sharp fall in prices.
- ❖ The MSP is announced by the government at the beginning of each cropping season, and it is based on the recommendations of the Commission for Agricultural Costs and Prices (CACP).

2. Calculation of MSP

The MSP is calculated considering various factors such as:

- ❖ Production costs
- ❖ Market prices
- ❖ International prices
- ❖ Domestic demand and supply
- ❖ Farmers' profit margins

3. Objectives

- ❖ Ensure a minimum return on crops for farmers.
- ❖ Provide a safety net against price fluctuations.
- ❖ Encourage farmers to produce crops, even in uncertain market conditions.

4. Key Components

- ❖ **A2 (Actual Paid-Out Costs):** Includes seeds, fertilizers, pesticides, fuel, irrigation, hired workers, and leased-in land.
- ❖ **C2 (Comprehensive Costs):** Includes A2 plus imputed value of unpaid family labor, capital assets, and rentals, and interest forgone on owned land and capital assets.

5. Kharif Crops Covered Under MSP

- | | |
|---------------|------------------|
| ❖ Paddy | ❖ Moong |
| ❖ Ragi | ❖ Urad |
| ❖ Bajra | ❖ Groundnut |
| ❖ Jowar | ❖ Sunflower seed |
| ❖ Maize | ❖ Soybean |
| ❖ Cotton | ❖ Nigerseed |
| ❖ Tur (Arhar) | ❖ Sesamum |

BRAIN BOOSTERS

Special Category Status

Why in Broadcast

The demand for 'special category status' for Andhra Pradesh and Bihar is likely to get louder with the formation of a coalition government at the Centre. The new government is dependent on the support of N Chandrababu Naidu's Telugu Desam Party and Nitish Kumar's Janata Dal (United), so it will be difficult for the NDA government to shrug off the demand.

5. Benefits of Special Category Status

- ❖ SCS states receive a higher share of central funds (90% grant and 10% loan) compared to non-SCS states (30 to 50% grant and 70 to 50% loan).
- ❖ SCS states are eligible for concessional loans and grants from the central government.
- ❖ SCS states are exempt from paying certain taxes, like excise duty and customs duty.
- ❖ SCS states receive investment subsidies and other incentives to attract industries and investments.
- ❖ SCS states are given priority in the implementation of central government development projects and schemes.
- ❖ SCS states are given relaxation in certain norms and regulations, like matching grants for central schemes.
- ❖ SCS states are eligible for special assistance from the central government in times of natural disasters or other crises.

1. What is Special Category Status?

- ❖ Special Category Status is a classification granted to some States by the Centre to assist development, based on geographical and socio-economic disadvantages.
- ❖ The scheme was introduced in 1969 on the recommendation of the Fifth Finance Commission.

2. Five factors that are considered before granting SCS to a State(Gadgil Formula)

- ❖ Hilly and difficult terrain.
- ❖ Low population density and/or sizeable share of tribal population.
- ❖ Strategic location along international borders.
- ❖ Economic and infrastructural backwardness.
- ❖ Non-viable nature of State finances.

3. Some Important Information

- ❖ Currently, 11 States in India Arunachal Pradesh, Assam, Himachal Pradesh, Jammu and Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, and Uttarakhand have SCS.
- ❖ Telangana, the newest State of India, was accorded the status as it was carved out of another state Andhra Pradesh.
- ❖ The 14th Finance Commission has done away with the 'special category status' for states, except for the Northeastern and three hill states.
- ❖ It suggested to fill the resource gap of such states through tax devolution by increasing it to 42% from 32%.
- ❖ SCS is different from Special status which imparts enhanced legislative and political rights, while SCS deals with only economic and financial aspects.
- ❖ For instance, J&K used to have Special status before Article 370 was repealed.

4. Concerns regarding Special Category Status

- ❖ It causes increased burden on Central Finances.
- ❖ Also, giving special status to a state leads to demands from other states too. For instance, demands from Andhra Pradesh, Odisha and Bihar.

BRAIN BOOSTERS

Two New Schemes for MSME Sector

Why in Broadcast

Union Minister for Micro, Small and Medium Enterprises (MSME), Jitan Ram Manjhi, launched two new schemes on World MSME Day in New Delhi. These schemes are 'MSME TEAM', and Yashasvini campaign.

6. Schemes for MSMEs in India

- ❖ **Prime Minister's Employment Generation Programme (PMEGP):** Assists entrepreneurs in setting up new units in the non-farm sector to provide employment opportunities to traditional artisans and rural and urban unemployed youth.
- ❖ **Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE):** Provides credit guarantee support to Member Lending Institutions for credit facilities sanctioned by them to MSMEs.
- ❖ **Entrepreneurship Skill Development Programme (ESDP):** Promotes new enterprises, builds the capacity of existing MSMEs and inculcates entrepreneurial culture in the country.
- ❖ **MSME Champions Schemes:** Comprises three components - MSME-Sustainable (ZED), MSME-Competitive (Lean) and MSME-Innovative (for Incubation, IPR, Design and Digital MSME).
- ❖ **Micro and Small Enterprises Cluster Development Programme (MSE-CDP):** Enhances the productivity and competitiveness of MSEs for their holistic development.
- ❖ **Emergency Credit Line Guarantee Scheme (ECLGS):** Provides 100 per cent guarantee coverage to the banks and NBFCs to encourage them to lend to MSMEs facing a liquidity crunch due to delayed payments and lockdowns in several markets.

1. About MSME Team

This project aims to assist five lakh small enterprises in joining the Open Network for Digital Commerce by providing financial aid with onboarding, cataloging, account management, logistics and packaging design.

2. About Yashasvini Campaign

This initiative will raise awareness and support for women-owned enterprises. It will provide training, capacity building, and mentorship to help formalize informal micro-enterprises.

3. About MSME Day

- ❖ In April 2017, the United Nations General Assembly designated June 27 as International Micro, Small, and Medium-sized Enterprises Day.
- ❖ This day is observed to raise awareness about the role of MSMEs in attaining sustainable development goals and supporting innovation and creativity.
- ❖ The 2024 theme for MSMEs is "Leveraging Power and Resilience of Micro-, Small and Medium-sized Enterprises to Accelerate Sustainable Development and Eradicate Poverty in Times of Multiple Crises".
- ❖ According to the UN, MSMEs contribute to 90% of businesses, 70% of employment and 50% of the GDP across the world.

4. Definition of MSME in India

- ❖ **Micro enterprises:** Investment limit is less than 1 crore INR, and the turnover limit is less than 5 crore INR.
- ❖ **Small enterprises:** Investment limit is 1-10 crore INR, and the turnover limit is 1-25 crore INR.
- ❖ **Medium enterprises:** Investment limit is 10-50 crore INR, and the turnover limit is 25-250 crore INR.
- ❖ This definition of MSME was introduced in 2020 under the MSME Act of 2006.

5. MSMEs in India

- ❖ The MSMEs are a significant contributor to India's economy and are the second-largest employer in the country.
- ❖ There are around 63 million MSME units in India, with over 99% of them categorized as small units.
- ❖ The MSME sector contributes over 28% of the GDP and around 45% to the manufacturing output.

BRAIN BOOSTERS

UNSC

Why in Broadcast

The UN General Assembly has elected Denmark, Greece, Pakistan, Panama and Somalia to serve as non-permanent members on the Security Council for two-year terms beginning on 1 January next year. The five countries will replace Ecuador, Japan, Malta, Mozambique and Switzerland, whose terms will end December 31, 2024.

4. Comparison between UNSC

Point	UNSC	UNGA
Purpose	Maintaining international peace and security, preventing wars and conflicts.	Discussing and making recommendations on various international issues, including peace, security, development, and human rights.
Composition	15 members (5 permanent, 10 non-permanent).	193 member states (equal representation).
Decision-making	Decisions made by minimum 9 votes (including at least one permanent member).	Decisions made by simple majority vote (50% + 1).
Voting power	Permanent members have veto power.	No veto power, equal voting rights for all members.

1. Election of Non-Permanent Members of UNSC

- ❖ **Candidates:** Member states submit their candidacies to the UN Secretary-General.
- ❖ **Regional Groups:** Candidates are selected by their respective regional groups (African, Asian-Pacific, Eastern European, Latin American and Caribbean, and Western European and Others).
- ❖ **Secret Ballot:** The UN General Assembly conducts a secret ballot vote.
- ❖ **Required Majority:** A two-thirds majority (128 votes out of 193 member states) is required for election.
- ❖ **Eligibility:** Members are eligible for re-election after a two-year interval.
- ❖ **General Assembly President:** The President of the General Assembly oversees the election process.

2. About UNSC

- ❖ The UNSC was established under the UN Charter to maintain international peace and security in 1946.
- ❖ The Council has 15 members, including 5 permanent members (China, France, Russia, UK, US) and 10 non-permanent members elected for 2-year terms.

3. Powers of UNSC

- ❖ **Maintaining International Peace and Security:** UNSC is responsible for maintaining international peace and security, and preventing wars and conflicts.
- ❖ **Imposing Sanctions:** UNSC can impose economic sanctions, arms embargoes, and travel bans on countries or individuals.
- ❖ **Authorizing Peacekeeping Missions:** UNSC can authorize peacekeeping missions to conflict zones.
- ❖ **Making Decisions on International Disputes:** UNSC can make decisions on international disputes, including border disputes and territorial claims.
- ❖ **Authorizing Enforcement Action:** UNSC can authorize member states to take enforcement action, including military action, to maintain international peace and security.
- ❖ **Electing the UN Secretary-General:** UNSC recommends a candidate for the UN Secretary-General to the General Assembly.
- ❖ **Admitting New Members:** UNSC recommends new members for admission to the UN.
- ❖ **Suspension:** UNSC can suspend for non-compliance with its decisions.

Places in News

Senkaku Islands

China's Coast Guard vessels have recently spent a record-breaking 158 days in the waters near islands controlled by Japan in the East China Sea, surpassing the previous record set in 2021.

About Senkaku Islands:

- ❖ The Senkaku Islands, located in the East China Sea, are a cluster of small, uninhabited islands. This archipelago consists of five uninhabited islands and three barren rocks, varying in size from 800 m² to 4.32 km².
- ❖ The islands are individually named Uotsuri Island, Kuba Island, Taisho Island (also known as Kumeakashima Island), Kitakojima Island, Minamikojima Island, Tobise Island, Okinokitaiwa Island, and Okinominamiwa Island.
- ❖ Known as the Senkaku Islands in Japan, Diaoyu Islands in China, and Tiaoyutai Islands in Taiwan, the strategic location of these island is near crucial shipping lanes and abundant fishing grounds. Further, potential oil and gas reserves beneath the seabed, add to their geopolitical significance.
- ❖ Control over these islands carries substantial implications for the security and economic interests of the claimants, shaping regional stability and order in East Asia.

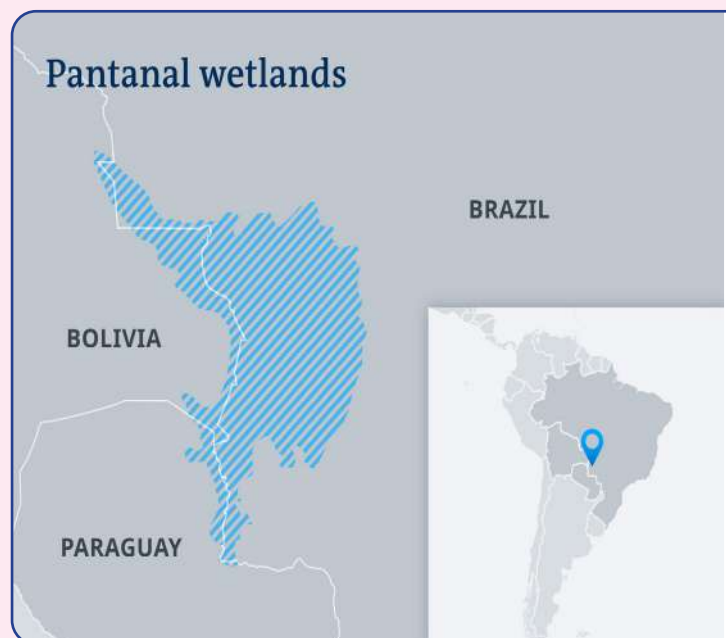


Pantanal Wetlands

The Pantanal wetlands in Brazil have been facing unusually high wildfires due to exceptionally dry weather seasons.

About Pantanal Wetlands:

- ❖ The Pantanal wetlands are the largest tropical wetlands of the world located at the center of South America. It primarily lies in Brazil but extends to Bolivia and Paraguay.
- ❖ It is a unique and complex ecosystem characterized by its seasonal flooding. From October to March, floodwaters fill the Pantanal like a giant reservoir and drain out slowly between April and September, providing ideal aquatic habitat, nutrient renewal, and flood control for millions of people downstream.
- ❖ Additionally, the Pantanal is one of the most biologically rich environments on the planet with more than 4,700 plant and animal species. It contains South America's highest concentration of some wildlife species, including the jaguar and caiman.

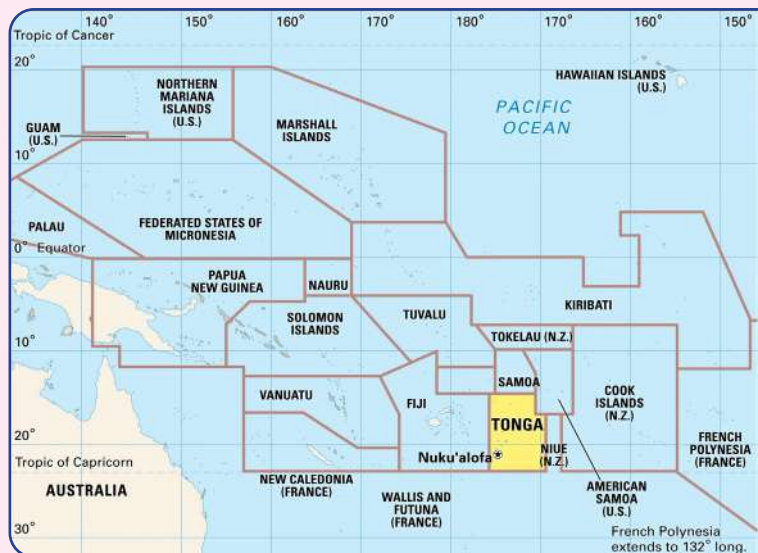


Tonga

A recent study has predicted that volcanic eruption of Hunga Tonga-Hunga Ha'apai (Hunga tonga) in Tonga could cause unusual weather for the rest of the decade.

About Tonga:

- ❖ Tonga is a Polynesian country lying in south western pacific. It lies to south of Samoa, southeast of Fiji and Northeast of New Zealand.
- ❖ Geographically it is an archipelago consisting of 176 islands, 36 among which are inhabited. These islands are divided into four main groups called Tongatapu, Ha'apai, Vava'u and the Ninus.
- ❖ The capital of Tonga called Nuku'alofa is located in the main island of Tongatapu. The western islands of Tonga are Volcanic with four active volcanos sitting well above the sea level.

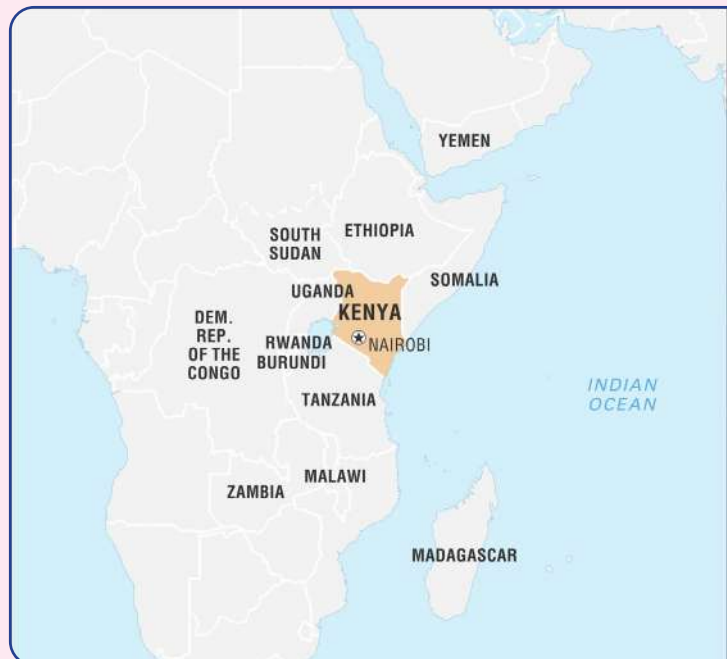


Kenya

Massive protests have engulfed Nairobi, the capital of Kenya, due to the passage of a financial bill. Police fired tear gas and water cannons to control the crowd protesting against the proposed tax hikes.

About Kenya:

- ❖ Kenya is situated on the eastern coast of Africa, bordered by the Indian Ocean to the southeast. It shares land borders with Tanzania to the south, Uganda to the west, South Sudan to the northwest, Ethiopia to the north, and Somalia to the east.
- ❖ Kenya boasts diverse geographical features, including the Great Rift Valley, the Kenyan Highlands, the Maasai Mara savannahs, and the coastal regions along the Indian Ocean. The capital and largest city is Nairobi.
- ❖ Kenya has a diverse population comprising various ethnic groups, including the Kikuyu, Luo, Luhya, Maasai, and others.
- ❖ Kenya is renowned for its wildlife and is a popular destination for safaris. National parks and reserves, including the Maasai Mara, Amboseli, and Tsavo inhabited by expansive biodiversity including varieties of flora and faunas.



State-Based Current Affairs

Current Affairs: Uttar Pradesh

School of Medical Research and Technology to be opened in IIT Kanpur

The cabinet has decided to open School of Medical Research and Technology (SMRT) and a 500-bed super specialty hospital in Indian Institute of Technology (IIT), Kanpur.

Important points:

- ❖ SMRT will also conduct super specialty courses in oncology, cardiology, cardiovascular and thoracic surgery, neurosurgery, gastroenterology, nephrology, urology and neurology. This will help in preparing specialist doctors in various disciplines of medicine.
- ❖ IIT Kanpur will bear the entire cost of running the 500-bed super specialty hospital and SMRT. A member of the UP government will also be nominated in the governing body formed for their operation and maintenance.
- ❖ IIT alumni are continuously providing financial support for both the projects. This scheme is worth about Rs 650 crore, in which about Rs 250 crore has already been provided by the alumni.
- ❖ The school will be named as The Gangwal School of Medical Sciences and Technology (GSMST) to honour the generous contribution of a distinguished alumnus Rakesh Gangwal, co-founder of Indigo Airlines.

Industry 4.0: Uttar Pradesh government to equip future workforce with AI

Uttar Pradesh nodal technical university has tied up with technology major IBM for Artificial Intelligence (AI) and cloud computing training to connect the future workforce with the modern Industry 4.0 concept.

Key Points:

- ❖ Abdul Kalam Technical University (AKTU) of the state has signed a memorandum of understanding (MoU) with IBM for free online courses in training programmes in more than 500 affiliated colleges.

- ❖ IBM will provide free online courses to registered students of BTech stream under the AKTU network.
- ❖ As Uttar Pradesh has the fourth largest startup ecosystem in the country, the government is taking steps to integrate education with incubators and facilitate angel funding for business ideas.
- ❖ Currently, more than 60 incubators are functioning in the state.

Industry 4.0:

- ❖ Industry 4.0 refers to the integration of intelligent digital technologies into manufacturing and industrial processes. It includes a set of technologies such as industrial IoT (Internet of Things) networks, AI, big data, robotics, automation.

Incubators:

- ❖ Business incubators are institutions that help entrepreneurs develop their businesses in the early stages.

Uttar Pradesh Cabinet approves new transfer policy 2024-25

Recently, under the new transfer policy 2024-25, Group A and B officers who have completed 3 years in the district and 7 years in the division will be transferred. At the same time, the oldest officers in Group C and D will be transferred first.

Important points:

- ❖ Transfers in Group C and D will be completed entirely through the Human Resource Portal. Under the system of Human Resource that has been started, the arrangement for relieving and taking over the charge after the transfer can be done online only.
- ❖ If more than 10 percent transfer has to be done, then the permission of the Minister of the Department will be required for this. At the same time, if there is a need to transfer more than 20 percent in Group A and B, then it will be necessary to take permission from the Chief Minister.

UP: Ranks first in Electric Transmission Line Expansion

According to the data released by the Central Electricity

Authority (CEA), Uttar Pradesh has emerged as the leading state in the whole country in terms of expansion of transmission lines by the state in the financial year 2024.

Important Points:

- ❖ In the financial year 2024, a total of 6,993 circuit kilometer (ckm) transmission lines were expanded in the state, which is about 64 percent against the target set at 11,002 circuit kilometer (ckm).
- ❖ Gujarat is in second place with a share of 13 percent. Tamil Nadu is third, Andhra Pradesh fourth and Bihar fifth in this work.
- ❖ In 2024, Uttar Pradesh Power Transmission Corporation Limited (UPPTCL), the state utility, expanded 1,460 circuit kilometer (ckm) transmission lines of 220 kV or above.

QS World University Ranking 2025

Indian Institute of Information Technology, Allahabad (IIIT-A) has secured 1,401 rank worldwide and 46th rank in the overall category in the QS World University Rankings 2025.

- ❖ IIIT-A is the only IIIT in the country to get this global ranking.
- ❖ QS World University Rankings are released by Quacquarelli Symonds.
- ❖ In the QS World Rankings, institutes are evaluated on 9 parameters that include: Employer Reputation, Academic Reputation, Citations per Faculty, International Faculty Ratio, International Student Ratio, International Research Network, Faculty Student Ratio, Employment Outcome and Sustainability.
- ❖ In this ranking, Indian Institute of Management Ahmedabad has secured 22nd rank in the Business and Management Studies category.
- ❖ Indian Institute of technology, Mumbai and IIT Delhi have been jointly ranked 45th in the Engineering and Technology category.
- ❖ Delhi University has been ranked 210th in Arts and Immunities subjects.

Moradabad University Renamed

- ❖ Recently, the Uttar Pradesh cabinet approved changing the name of Moradabad University to Guru Jambheshwar State University.

- ❖ This name change honors the 493-year-old temple of Guru Jambheshwar in Lodipur Vishanpur, where 90 percent of the population belongs to the Vishnoi community.
- ❖ According to local residents, Guru Jambheshwar Bhagwan came to Lodipur Vishanpur from Rajasthan 493 years ago in Vikrami Samvat 1587.

Current Affairs: Bihar

Kanwar Lake: Bihar's Sole Ramsar Site may become Extinct

Recently environmentalists have expressed the possibility of the Kanwar lake becoming extinct in the future.

- ❖ Encroachment on the lake for agricultural purposes is increasing and the number of birds in the reservoir is also decreasing.
- ❖ Birds are facing habitat destruction, habitat encroachment and large-scale hunting.
- ❖ Water scarcity in most of its parts of wetlands like Kanwar is a matter of serious concern.
- ❖ The drying up of Kanwar lake has adversely affected the livelihood of thousands of fishermen living around it and many have been forced to migrate out in search of other jobs.

About Kanwar lake:

- ❖ It is the largest freshwater lake in Asia and the only Ramsar site of Bihar.
- ❖ It is also known as Kabartal lake.
- ❖ It is a residual oxbow lake, formed due to the winding flow of Gandak, a tributary of the Ganges.
- ❖ It covers most of the Indo-Gangetic Plain in northern Bihar.
- ❖ The wetland is an important stopover on the Central Asian Flyway, where 58 migratory aquatic birds come to rest and gain energy.
- ❖ It is also a valuable site for fish biodiversity, with over 50 species found there.

Bihar tops in terms of expenditure on Higher Education

- ❖ The audit report of the Central Government has revealed that Bihar has spent the most on higher education.
- ❖ According to the report, Bihar has made significant progress in qualitative improvement in higher education compared to other states.
- ❖ This list includes states that have spent more than 1.75 percent of their GSDP budget on higher education.
- ❖ According to the report released by the Central Government, Bihar has spent 2.17 percent of its GSDP on higher education.
- ❖ Further, states like Bengal, Andhra Pradesh, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh, and Karnataka have failed to spend adequately on higher education. None of these states have allocated even one percent of their GSDP for the improvement of higher education.
- ❖ The recently published audit report by the Government of India discusses the construction of higher education institutions and the development of new infrastructure in Bihar.
- ❖ The report highlights that the Bihar government has prioritized its education budget, achieving the highest spending on higher education four times in the last 10-12 years. Bihar met this target in the financial years 2019-20, 2014-15, 2013-14, and 2012-13.

Bihar Reservation notification struck down

The Patna High Court has struck down the Bihar government's notification raising reservation in government jobs and educational institutions from 50% to 65%.

Reasons behind such decision:

- ❖ **Population cannot be the sole basis:** The High Court struck down the Bihar government's move to increase quotas on various grounds and made it clear that population percentage cannot be the sole basis for it, merit cannot be completely compromised and the move violates of the provisions of the right to equality of the Constitution.
- ❖ **Exceeding 50% reservation limit:** The amendments

raised reservation in Bihar to 65%, which was higher than the 50% limit set by the Supreme Court in the Indra Sawhney case (1992). The Court upheld the 50% limit as the legal bar on total reservation.

- ❖ **Lack of proportional basis:** The reservation increase was not based on the proportional representation framework, which is necessary to make reservation policies consistent with constitutional principles.
- ❖ **Lack of adequate study:** The state government did not conduct any in-depth analysis or study to justify the need for the increase in reservation and its impact, raising concerns over the rationale behind the amendments.
- ❖ **Judicial precedents:** The court cited previous judgments and constitutional interpretations that underscored the importance of maintaining a balance between affirmative action and constitutional limits on reservation.
- ❖ Earlier Maharashtra increased total reservation to 68%, which was struck down by the Supreme Court in 2021 for exceeding the 50% limit.

Climate-friendly farming scheme restarted in Bihar

- ❖ The state of Bihar is set to restart its climate-friendly agriculture scheme for the upcoming Rabi season.
- ❖ The climate-friendly agriculture scheme, initially launched in 8 districts of the state in 2019, will be reinstated in the upcoming Rabi season.
- ❖ This initiative aims to tailor the crop cycle to suit the specific conditions of each district.
- ❖ The scheme will promote high-quality seeds capable of withstanding adverse climatic conditions.
- ❖ Additionally, seed production will be conducted on at least 20 acres of land in each district, ensuring the availability of pure seeds to farmers through collaboration with state agricultural universities.

Chunav Mitra App and WhatsApp Chatbot launched

- ❖ Bihar Chief Electoral Officer HR Srinivas launched the 'Chunav Mitra App' and WhatsApp Chatbot.
- ❖ It provides various information related to voting,

including details about polling stations, directions to reach the polling station and information about the district control room and voter helpline.

- ❖ Real-time voter information: This app allows users to get real-time updates about the number of voters present at polling stations on the day of elections.
- ❖ WhatsApp Chatbot: Voters can get all the necessary information related to voting through the WhatsApp chatbot.

Solar Power Plant in Banka

- ❖ Bihar's largest solar power plant was commissioned in Banka, Bihar.
- ❖ Bihar commissioned a new 50 MW solar power plant by Avaada Group in Banka district, taking its total solar capacity to 181.1 MW.
- ❖ This will help India achieve net-zero carbon emissions by 2070 and 50% of electricity from renewable sources by 2030 by ramping up renewable energy generation.

Saran district topped the ranking of Bihar Police's economic and cyber-crime unit

- ❖ Cyber police stations across Bihar have been evaluated based on their action against cyber-crime, resulting in monthly rankings to assess their effectiveness.
- ❖ This ranking system considers various factors, including the number of cyber-related crimes reported, arrests made and funds released to victims.
- ❖ Saran district topped the ranking for the month of April, followed by Aurangabad, Muzaffarpur, Sitamarhi and Saharsa.
- ❖ Supaul, Sheohar, Nawada, Kishanganj and Khagaria performed the worst in dealing with cyber-crimes.

Patna Women's College got A++ grading by NAAC

- ❖ Patna Women's College has become the first college in Bihar to get A++ grading by NAAC.
- ❖ The college achieved an impressive overall CGPA of 3.51 in the NAAC assessment.
- ❖ Patna Women's College was founded in 1940 by

Bishop BJ Sullivan SJ, Bishop of Patna and Mother M. Josephine AC Superior General of the Apostolic Carmel. It was the first institution of higher education opened to meet the educational needs of women in Bihar.

About NAAC:

- ❖ The National Assessment and Accreditation Council (NAAC) is a government organization in India that assesses and accredits higher education institutions.
- ❖ It is an autonomous body funded by the University Grants Commission.
- ❖ Headquarter: Bangalore.

Current Affairs: Rajasthan

Sariska Tiger Reserve: Supreme Court orders closure of mines

- ❖ Supreme Court has banned all mining activities around the Sariska Tiger Reserve in Rajasthan. A bench headed by Justice BR Gavai in the court has ordered a ban on all activities within a radius of one kilometer of the critical tiger reserve.
- ❖ The Supreme Court has asked the Rajasthan government to close 68 mines located less than a kilometer from the Sariska Tiger Reserve. The decision is part of a larger effort to keep illegal mining away from the critical habitat of tigers, which has been a problem since the 1990s.

About Sariska Tiger Reserve:

- ❖ Sariska Tiger Reserve is located in the Aravalli Hills and is a part of the Alwar district of Rajasthan.
- ❖ Sariska was declared a wildlife sanctuary in 1955 and later declared a tiger reserve in 1978, making it a part of India's Project Tiger.
- ❖ Sariska is home to many animals other than tigers, including leopards, sambar and chital. The reserve is spread over about 800 square kilometers.

Maharana Pratap Tourist Circuit to be built in Rajasthan

- ❖ Recently, Rajasthan Chief Minister Bhajanlal Sharma has announced an important scheme, under which Maharana Pratap Tourism Circuit will be developed with an investment of Rs 100 crore.
- ❖ Under this project, Rajasthan Tourism Development Corporation will set up museums, provide basic amenities for tourists and do improvement work for these important places.
- ❖ The Maharana Pratap Tourism Circuit aims to preserve the rich historical and cultural heritage of the region by developing places associated with the life of Maharana Pratap of Mewar.
- ❖ It includes: Udaipur, Chavand, Haldighati, Gogunda, Kumbhalgarh, Dewar, Chapli, Chittorgarh.

Maharana Pratap Singh:

- ❖ Pratap Singh, popularly known as Maharana Pratap, was the king of Mewar, a region in the present-day state of Rajasthan.
- ❖ He was the eldest son of Udai Singh II (founder of the city of Udaipur).
- ❖ **Battle of Haldighati:** It was fought on 18 June 1576 between Maharana Pratap's army and the army of the Mughal emperor Akbar led by Man Singh I of Amber. The Mughals won, but failed to capture Pratap, who escaped.
- ❖ **Resurgence:** Mughal pressure on Mewar eased after 1579 following rebellions in Bengal and Bihar. Taking advantage of the situation, Pratap recovered western Mewar, including Kumbhalgarh, Udaipur, and Gogunda. During this period, he also built a new capital, Chavand, near modern Dungarpur.

Rajasthan's first woman minister Kamla Beniwal passed away

- ❖ Rajasthan's first woman minister Kamla Beniwal passed away recently on 15 May 2024 in Jaipur, Rajasthan. She was 97 years old. During her long political career, Kamla Beniwal, who was associated with the Congress party, held many constitutional posts.
- ❖ In 1954, at the age of 27, she was appointed a minister in the Mohanlal Sukhadia government. Thus she became the first woman to become a minister in Rajasthan. Later she handled various departments as a minister in various Congress governments in the state.

Operation Mera Maan Launched for the safety of girl students in Kota

- ❖ Recently, Superintendent of Police of Kota, Dr. Amrita Duhan told that an operation "Mera Maan" is being run by the police to solve the problems and ensure the safety of the girl students studying in Kota city.
- ❖ A program has been initiated to educate girl students about safety techniques and provide guidance on ensuring safety in various situations. As part of this initiative, coaching students were introduced to the Abhaya team, which is deployed daily in their area, on Fridays.

Current Affairs: Madhya Pradesh

Madhya Pradesh CM launches Shri Paryatan Vayu Seva

- ❖ Madhya Pradesh Chief Minister Mohan Yadav launched an interstate air service named 'PM Shri Paryatan Vayu Seva' from Raja Bhoj International Airport in Bhopal to promote tourism.
- ❖ Operated by the Madhya Pradesh Tourism Board (MPTB) in partnership with M/s Jet Serve Aviation Private Limited with two planes, this service connects eight cities in the state: Bhopal, Indore, Jabalpur, Gwalior, Khajuraho, Ujjain, Rewa, and Singrauli.
- ❖ The launch includes a 50 percent discount on fares for the first 30 days, making the inter-state service slightly more expensive than the Vande Bharat Express train but significantly faster, with the Bhopal to Indore route taking only 55 minutes.
- ❖ Flyola website has been developed for online ticket booking, highlighting the initiative's emphasis on promoting tourism through air travel in Madhya Pradesh.

Ministers should pay taxes on their salary and allowances themselves: M.P. Cabinet

- ❖ The Madhya Pradesh Cabinet recently unanimously

approved a significant change in policy regarding state ministers' income tax obligations.

- ❖ Since 1972, the state government had assumed responsibility for paying income tax on the salaries and allowances received by ministers under the provisions of the Income Tax Act 1961.
- ❖ This longstanding arrangement aimed to alleviate financial burdens on individual ministers.
- ❖ However, after 52 years, the cabinet has decided to shift this responsibility back to the ministers themselves. This decision marks a notable policy revision in the state's governance framework.

Current Affairs: Chhattisgarh

SAIL-Bhilai to set up Chhattisgarh's first floating solar plant

- ❖ Bhilai Steel Plant (BSP), a flagship unit of Steel Authority of India Limited (SAIL) located in Chhattisgarh, is all set to inaugurate the state's flagship floating solar project. The venture marks a significant moment in Chhattisgarh's renewable energy journey.
- ❖ This ambitious project spearheaded by BSP will install a 15 MW capacity floating solar plant in the massive Maroda-1 reservoir located in Durg district.
- ❖ Spread over 2.1 square kilometres, the reservoir with a water storage capacity of 19 cubic millimetres (MM³) not only caters to the plant's water needs but also supports the nearby townships.
- ❖ The floating solar plant is estimated to generate around 34.26 million units of green power annually. This renewable energy will be used by Bhilai Steel Plant as captive power, effectively contributing to its sustainability goals.
- ❖ The project is expected to reduce Bhilai Steel Plant's CO₂ emissions by 28,330 tonnes annually.

Suggestions sought from Naxalites for rehabilitation policy

- ❖ Deputy Chief Minister of Chhattisgarh has sought

suggestions from Naxalites for a new rehabilitation policy on surrender.

- ❖ Through this, the Chhattisgarh government wants to end Naxalism in the state and provide stability to the state by ensuring rehabilitation of Maoists.
- ❖ A scheme was launched to eliminate the problem of Maoists from the state, which is named Nellnar Yojana. An attempt to seek suggestions from Naxalites has been made under this scheme.

Niyad NellaNar Yojana:

- ❖ The Bijapur district of Chhattisgarh has recently received amenities under Niyad Nellanar Yojana. The Chief Minister Vishnudev Sai announced this scheme during the budget session of the Legislative Assembly. This scheme is related to the social and economic development of the tribals of Bastar.
- ❖ A scheme has been launched to develop villages in Naxal-affected areas, specifically targeting Bastar. It aims to bring various benefits to these villages, including those under the PM Awas Yojana, ration distribution, gram development, salt distribution, hand pump installation, bank sakhi services, ATM access, mobile tower installation, and Ujjwala Yojana for cylinder distribution.

Meaning of Niyad NellaNar:

- ❖ Niyad NellaNar' means "Apka apna Gaon" "your own village" or Your Happy Village. This sentence is taken from the dialects spoken in Bastar region of Chhattisgarh. Here, Nar means village.

Current Affairs: Uttarakhand

Name of Joshimath and Kosiyakutoli changed

- ❖ The recent proposal of the Uttarakhand government to rename Joshimath tehsil as Jyotirmath and Kosiyakutoli tehsil as Pargana Shri Kainchi Dham tehsil has received the Centre's approval.
- ❖ The demand of residents to restore the original name led Chief Minister Pushkar Singh Dhama to announce

the change last year.

- ❖ Joshimath and Kosiyaikutoli hold historic and spiritual significance, attracting pilgrims and devotees from across the country and abroad.

Significance of Jyotirmath:

- ❖ The name "Jyotirmath" derives from the divine light of knowledge attained by Adi Shankaracharya during his penance under the Amar Kalpavriksha, a symbol of profound spiritual wisdom.
- ❖ Over time, the ancient name "Jyotirmath" gradually transformed into "Joshimath" in colloquial language, reflecting linguistic and cultural evolution rather than any specific historical event.

Change of Kosiyaikutoli:

- ❖ Renaming Kosiyaikutoli as Pargana Shri Kainchi Dham Tehsil will link its identity with Neem Karoli Baba's Kainchi Dham Ashram, thereby increasing recognition and devotion.
- ❖ The name "Kosiyaikutoli" is derived from Kosi River, which emphasizes the ecological and economic importance of the area.

Uttarakhand government decided to abolish the revenue police system

- ❖ The Uttarakhand government has decided to abolish the revenue police system in the state and bring revenue villages under the regular police system. Law and order in 1,800 revenue villages of Uttarakhand will now be handled by the state police, as announced by the Chief Minister's Office.
- ❖ The system of revenue police in Uttarakhand state was started in the year 1861. Under which, from people Patwari, Kanungo, Tehsildar to Divisional Commissioner, had to perform the responsibility of police work along with revenue work.
- ❖ Patwaris played a significant role in this system but were not equipped with modern weapons to confront criminals; they only had a stick.
- ❖ According to Indian law, only regular police has the right to bear arms. Revenue police does not get this facility. Due to which this police coat is also known as 'Gandhi Police' in Uttarakhand.

Nakshatra Sabha: Astro-tourism in Uttarakhand

- ❖ Starscapes and the Uttarakhand Tourism Development Board (UTDB) collaborated to launch an astro-tourism campaign called Nakshatra Sabha. The campaign, which commenced in George Everest, Mussoorie, in mid-June 2025, featured a variety of programs organized across the state.
- ❖ The campaign included a number of activities, including stargazing, special solar observations, astrophotography competitions, camping under the stars, etc.
- ❖ These programs explored potential night sky sites in districts like Uttarkashi, Pithoragarh, Nainital and Chamoli, as well as organized seminars and webinars by experts in the field.
- ❖ Astro tourism will not only provide skill development opportunities for local entrepreneurs interested in astronomy and tourism but will also boost the local economy.

Current Affairs: Jharkhand

Jharkhand government will waive loans up to Rs 2 lakh

- ❖ Recently, the Jharkhand government passed a provision in the budget to waive the loans of farmers who have borrowed up to Rs 2 lakh. This scheme aims to relieve farmers who are unable to repay their loans.
- ❖ Jharkhand Agriculture Minister Badal Patralekha said that the state government has decided to waive agri loans up to Rs 2 lakh in an effort to provide relief to more than 1.91 lakh farmers.

Objective of Jharkhand Agriculture Loan Waiver Scheme:

- ❖ The main objective of the Jharkhand Agriculture Waiver Scheme is to provide relief from the burden of loans to all farmers in the state who are unable to repay their loans.
- ❖ The scheme aims to improve the loan eligibility of

crop loan borrowers and prevent the migration of the farming community by ensuring access to new crop loans.

- ❖ The primary goal of the Jharkhand government through this scheme is to strengthen the agricultural economy.

India's first pilot project for underground coal gasification launched

- ❖ The Ministry of Coal launched India's first pilot project for underground coal gasification in Kasta coal block in Jamtara district of Jharkhand.
- ❖ The initiative, under the aegis of Eastern Coalfields Limited (ECL), aims to revolutionise the coal industry by converting coal into valuable gases such as methane, hydrogen, carbon monoxide and carbon dioxide through in-situ gasification.
- ❖ This pilot initiative is a major milestone for Coal India Limited (CIL) and its subsidiaries, placing India at the forefront in adopting cutting-edge coal gasification technologies.
- ❖ In December 2015, the Ministry of Coal approved a comprehensive policy framework for UCG (Underground Coal Gasification) in coal and lignite-rich areas.

Current Affairs: Haryana

Haryana's New Excise Policy

Recently, the Haryana Cabinet approved a new excise policy for the year 2024-25.

Key Points:

- ❖ The new policy will see a marginal increase in excise duty on Indian-made foreign liquor and country liquor.
- ❖ The maximum basic quota of IMFL for the year 2024-25 will be 700 lakh proof litres (measurement unit) and 1,200 lakh proof litres for country liquor.
- ❖ The QR code-based track and trace system introduced in 2023-24 for IMFL and country liquor will also be

extended to imported foreign liquor.

- ❖ The maximum number of retailers will remain the same in the new policy. People interested in participation in the e-auction will have to submit Aadhaar card or family identity card, income tax returns of the last three assessment years and should have a minimum net worth of Rs 60 lakh.

Rs 10,000 crore project launched to tackle air pollution

- ❖ Recently, Haryana Chief Secretary TVSN Prasad said that the state government will soon launch a Rs 10,000 crore project funded by the World Bank to tackle air pollution.
- ❖ The first phase of which will be implemented in the districts falling in the National Capital Region (NCR) and later it will be implemented across the state.
- ❖ The initial phase involves increasing Haryana's air quality monitoring infrastructure. This includes setting up a state-of-the-art laboratory and modernization of four existing laboratories. Additionally, a dedicated program management unit will be set up to oversee the implementation of the project.

Age limit removed in Kisan and Khetihar Mazdoor Jeevan Suraksha Yojana

- ❖ The Haryana government removed the age limit on the Mukhyamantri Kisan and Khetihar Mazdoor Jeevan Suraksha Yojana with the aim of providing financial assistance to farmers and agricultural workers in case of death or disability during agricultural work.
- ❖ Children below 10 years of age and persons above 65 years of age will now be able to benefit from the scheme. Previously, the scheme stipulated that the age of the victim should be between 10 and 65 years.
- ❖ Under this scheme, financial assistance ranging from Rs 37,500 to Rs 5 lakh is provided to farmers, agricultural laborers, laborers working in market yards in case of death or loss of limbs while working on agricultural machinery.

Power Packed News

Genetically Modified Mosquitos

Recently, Genetically Modified (GMO) mosquitoes were released in Djibouti, East Africa to fight malaria.

About Genetically Modified Mosquitoes:

- ❖ Genetically modified mosquitoes are designed to combat vector-borne diseases such as malaria, dengue fever, Zika virus, etc. by controlling the growth of disease-carrying mosquito species.
- ❖ These mosquitoes are designed by incorporating genetic modifications that either reduce their ability to transmit diseases or inhibit their population growth.
- ❖ These mosquitoes are specifically designed to target disease-carrying mosquito species such as *Aedes aegypti* and *Anopheles stephensi* while minimizing damage to other organisms in the ecosystem.

National Institute of Mental Health and Neurosciences

The Bengaluru-based National Institute of Mental Health and Neurosciences (NIMHANS) has been recently awarded the Nelson Mandela Health Promotion Award for the year 2024 by the World Health Organization (WHO).

About National Institute of Mental Health and Neurosciences:

- ❖ The National Institute of Mental Health and Neurosciences is an 'Institute of National Importance' and functions as an autonomous institute under the Union Ministry of Health and Family Welfare.
- ❖ It was established in 1974 in Bengaluru, Karnataka with the objective of meeting the growing need for specialized care and research in the areas of mental health and neurosciences.
- ❖ It was conferred the status of an Institute of National Importance by an Act of Parliament in 2012.
- ❖ The Institute specializes in providing comprehensive care, conducting cutting-edge research and providing academic programs in the areas of mental health, neurology, psychiatry, psychology and allied subjects.
- ❖ Headquarter: Bengaluru, Karnataka.

Nelson Mandela Award:

- ❖ The Nelson Mandela Health Promotion Award was established by the World Health Organization (WHO) in 2019.
- ❖ The award honours individuals, institutions, governmental or non-governmental organisations for their outstanding contribution to health promotion.

Initiative to clean Sunkosi River

An initiative was recently undertaken to clean the Sunkosi River in Bagmati Province, Nepal. Organized by Project CAP (Collaborative Approaches to Prevent Plastic Leakage into Rivers) under the program "PLEASE (Plastic Free Rivers and Seas of South Asia)", the river cleaning drive took place in Golanjor Rural Municipality .

About Sunkosi River:

- ❖ The Sunkosi River is one of the major tributaries of the Kosi River (Sorrow of Bihar) located in Nepal.
- ❖ It originates from the Tibet Autonomous Region of China and flows through the Himalayas in Nepal.
- ❖ It is known for its white-water rafting opportunities and is one of the major rivers of Nepal.
- ❖ This river is fed by various tributaries like Dudh Kosi, Likhu Khola, Tamakosi and Indravati.
- ❖ India has banned single-use plastic from July 1, 2022 under the Plastic Waste Management Amendment Rules, 2021.

Oge Tribe

The Oge tribe of the Andaman Islands celebrated the birth of a child to King Totoko and Queen Priya, increasing the total population of the tribe to 136.

About the Oge Tribe:

- ❖ The Oge are an indigenous Andamanese ethnic group and one of the oldest tribes in India.
- ❖ They are traditionally hunter-gatherers and fishermen, but also cultivate plants.
- ❖ They are part of the Negrito ethnic group, which is believed to be a remnant of the early migrations out of Africa.
- ❖ They call themselves N-Iregel, which means 'the perfect person.'
- ❖ This tribe is one of the least productive and infertile communities in the world.
- ❖ The Oge are semi-nomadic and live in two reserve camps on Dugong Creek, in the northeast and South Bay on Little Andaman.

Sticky Inflation

The Reserve Bank of India kept the repo rate steady for the eighth consecutive time in its latest monetary policy review due to concerns about sticky inflation.

About Sticky Inflation:

- ❖ Sticky inflation refers to a situation where inflation rates remain persistently high over a long period of time.
- ❖ This inflation is caused by wage-price spirals, supply chain disruptions and persistent expectations of higher inflation among businesses and consumers.
- ❖ It reduces purchasing power, creates uncertainty in business planning and may prompt central banks to raise interest rates, thereby hurting economic growth along with borrowing costs.
- ❖ Central banks may find it challenging to control sticky inflation through interest rate adjustments because of policy lags, which lead to a delay in seeing the effects of monetary policy measures on inflation.
- ❖ Examples of sticky inflation include the inflation of the 1970s, which was characterized by high inflation alongside stagnant economic growth and high unemployment, and recent trends where various global economies are facing prolonged inflationary pressures following the pandemic due to supply chain disruptions and increased demand.

Rajeev Taranath

- ❖ Rajeev Taranath, Indian classical musician and sarodist, died recently on 11 June 2024.
- ❖ Born in Bangalore, Karnataka, Rajeev Taranath, composed music for several internationally acclaimed Kannada films including Sanskara, Kanchana Sita and Kadavu.
- ❖ He served as the head of the Indian Music Program at the World Music Department of the California Institute of the Arts.
- ❖ He received the Padma Shri award in 2019.
- ❖ He was awarded the Central Sangeet Natak Academy Award, State Sangeet Vidwan Award, Chowdiah Award, Kannada Rajyotsava Award for his valuable contribution to Indian classical music.

Atlantic Bluefin Tuna

Scientists at Trinity College Dublin conducted a study that revealed that Atlantic bluefin tuna are migrating north due to warming seas.

About Atlantic Bluefin Tuna:

- ❖ The Atlantic bluefin tuna (*Thunnus thynnus*) is a large, migratory fish found in the North Atlantic Ocean.
- ❖ It plays a vital role in the marine ecosystem as an apex predator, controlling populations of prey species such as squid and smaller fish.
- ❖ There are three species of bluefin: Atlantic (the largest and most endangered), Pacific and Southern.

- ❖ It is one of the most commercially valuable fish species, prized for its high-quality meat in the sushi and sashimi markets in Japan.
- ❖ Its populations have declined severely globally due to overfishing, leading to international conservation efforts and increased fishing quotas.
- ❖ They make extensive migrations across the Atlantic Ocean, visiting a variety of areas to feed and spawn, including the Mediterranean Sea.
- ❖ International bodies such as ICCAT (International Commission for the Conservation of Atlantic Tuna) regulate fishing quotas and monitor populations to ensure sustainable management.
- ❖ It is listed as "Least Concern" on the IUCN Red List.

e-Migrate Portal

The Ministry of External Affairs and State Bank of India have recently signed a Memorandum of Understanding (MoU) to enhance digital payment services on the e-Migrate portal.

About e-Migrate Portal:

- ❖ The e-Migrate portal is a digital platform that helps make the emigration process more transparent and online for Indian workers.
- ❖ It was launched by the Ministry of Overseas Indian Affairs (MOIA) in 2014.
- ❖ The portal allows emigrants with ECNR (Emigration Check Not Required) category passports to voluntarily register for employment abroad.
- ❖ It is an initiative by the Ministry of External Affairs (MEA) to help blue-collar workers who want to work in countries where emigration checks (ECR) are required.
- ❖ It aims to make the emigration process online, easy and secure and protect the rights of migrant workers.
- ❖ It does so by digitizing the migration process and creating a common platform connecting foreign employers, registered recruitment agents, and insurance companies.
- ❖ It integrates with Common Service Centre (CSC) to provide registration, document management and service booking support to citizens.

Striped Caecilian

A limbless amphibian (striped caecilian) was recorded for the first time in Kaziranga National Park and Tiger Reserve during a Rapid Herpetofauna Survey conducted on June 14-17.

About Striped Caecilian:

- ❖ The striped caecilian (*Ichthyophis* spp.) is a limbless amphibian.
- ❖ The name "caecilian" comes from the Latin word caecus, meaning "blind".
- ❖ The Western Ghats of India is a biodiversity hotspot for caecilians, with 26 of the 39 species described in India being endemic to the region.
- ❖ The caecilian is a generalist predator that feeds on soil invertebrates such as earthworms, ants, termites and beetle pupae.
- ❖ It also feeds on leaf humus and other plant fragments.
- ❖ It burrows beneath the soil; found in diverse ecosystems such as floodplains, wetlands, grasslands and hilly areas on the periphery of Kaziranga.
- ❖ It has unique features such as tentacles, a bullet-shaped skull, and two sets of muscles that close the jaws. Some caecilian species are eyeless, while others have tiny eyes hidden beneath their skin.

Halla Tomasdottir becomes Iceland's second female President

- ❖ On June 2, Icelandic businesswoman Halla Tomasdottir won the presidential election. She will replace President Guðni Jóhannsson and take office on August 1. She has become the 7th President of Iceland.
- ❖ Halla Tomasdottir is the second female president of Iceland after Vigdís Finnbogadóttir, who became Iceland's first female president in 1980. She is a well-known businesswoman with experience in tourism, fisheries and retail.
- ❖ Her campaign was focused on tackling climate change, promoting social justice and strengthening Iceland's democracy.
- ❖ Tomasdóttir is known as a strong advocate for environmental and social issues.

President of Iceland:

- ❖ The President of Iceland is the head of the nation, but the role is largely symbolic. The President's term is four years.
- ❖ The President exercises some important powers such as forming the government, approving laws and representing the country in international affairs.

Claudia Shenbaum elected as Mexico's first female President

- ❖ Claudia Shenbaum of the ruling Morena party won the general election held in Mexico on June 2. This is the first time in Mexico's 200-year history that a woman will become the country's president.
- ❖ Claudia has been the former mayor of Mexico City and has long been associated with leftist politics. Oppositionist Shochil Galvez contested the election from the right-wing National Action Party (PAN).
- ❖ Mexico made history by electing a female president before its neighbouring country the US.
- ❖ Her victory is a major achievement towards women's empowerment and shows that women in Latin America are now coming to the forefront of political leadership.
- ❖ Claudia Shenbaum faces many challenges, including strengthening the economy, reducing crime and fighting corruption.
- ❖ Women got voting rights in the US in 1920 itself, while in Mexico women got the right to vote in 1953.

Japan Airlines and IndiGo sign a codeshare deal

- ❖ On June 3, 2024, Japan Airlines (JAL) and IndiGo signed a codeshare deal.
- ❖ Under this deal, JAL will put its code (JL) on flights operated by IndiGo to 14 Indian cities (Delhi, Mumbai, Chennai, Bengaluru, Hyderabad, Kochi, Ahmedabad, Goa, Pune, Lucknow, Varanasi, Patna, Gaya and Trivandrum).
- ❖ This deal will help JAL expand its reach in India and strengthen its hold in the domestic market.
- ❖ For IndiGo, this deal will provide access to international passengers and enhance its presence in the global market.
- ❖ This deal will also help strengthen the relationship between India and Japan.

Key benefits of the deal:

- ❖ Increased air connectivity between India and Japan.
- ❖ Boost trade and tourism between the two countries.
- ❖ Access to more destinations for customers.
- ❖ More revenue for both JAL and IndiGo.

Rakesh Mohan Joshi appointed as IIFT Vice Chancellor

- ❖ Rakesh Mohan Joshi has been appointed as the Vice Chancellor of Indian Institute of Foreign Trade (IIFT).
- ❖ Prior to this, he was the Dean of IIFT and Director of Indian Institute of Commercial Management, Bengaluru.
- ❖ He has studied at Harvard Business School, IIFT, University of Rajasthan, and National Dairy Research Institute,

Karnal.

- ❖ Joshi has worked with multilateral organizations such as the World Bank, Asian Development Bank, UNCTAD, International Dairy Federation, and Asian Productivity Organization.
- ❖ He has expressed his commitment to make IIFT a world-class business school and make India a global powerhouse in global trade.

India and Peru Sign Agreement on UPI

- ❖ The National Payments Corporation of India (NPCI) has signed an agreement with the Central Reserve Bank of Peru (BPRP). Under this agreement, NPCI will develop the Unified Payment Interface (UPI) in Peru.
- ❖ Peru has become the first country in South America to adopt UPI. This initiative will establish a domestic and international payment network in Peru. Through UPI, Peruvian users will be able to make payments instantly, as this system facilitates fund transfer in real time.
- ❖ UPI was launched by the Government of India on 11 April 2016 and is already active in Singapore, Malaysia, UAE, France, Nepal, UK, Mauritius, and Sri Lanka. UPI

Repo Rate Unchanged in RBI Monetary Policy Review

- ❖ The Reserve Bank of India (RBI) has kept the repo rate unchanged at 6.5% for the eighth time in a row in its bi-monthly monetary policy review on June 7, 2024.
- ❖ The decision was taken keeping in mind the uncertainty in the global economy, inflationary pressures and the pace of domestic growth.
- ❖ Additionally, RBI has raised its growth forecast for headline inflation from 4.8% in April 2024 to 5.7% by the end of March 2025.
- ❖ The RBI has projected India's economic growth rate to be 7.2% for the financial year 2024-25.
- ❖ Monetary policy is a complex tool that can have a variety of impacts on the economy.

Sunil Chhetri retires from International Football

- ❖ Indian football legend Sunil Chhetri retired from international football after the FIFA World Cup 2026 qualifier match against Kuwait on 6 June 2024.
- ❖ It was a historic moment for Indian football. Chhetri has been representing the national team for over 19 years and has set many records during this time.
- ❖ Chhetri has scored 94 goals in 151 matches in his international career. He is the fourth highest goal scorer at the international level only behind Cristiano Ronaldo (130 goals), Ali Daei (109 goals) and Lionel Messi (108 goals).
- ❖ He is one of the players who has played the most matches for the Indian team (around 151 international matches for India). He is ahead of Baichung Bhutia (104 matches) in this record.

Selection of 5 temporary members in United Nations Security Council

- ❖ The United Nations Security Council has recently selected 5 temporary members. These 5 temporary members include Pakistan, Denmark, Greece, Panama, and Somalia.
- ❖ These countries will replace Japan, Ecuador, Malta, Mozambique, and Switzerland in the UNSC. Their term will end on 31 December 2024. In this voting, the 193-member UNSC selected 5 countries through secret ballot.
- ❖ These temporary members will become members of the largest Security Council of the UNSC from 2025 to 2026.
- ❖ In the voting, Somalia got 179 votes for African and Asia-Pacific countries, Pakistan got 182 votes. Panama got 183

votes, Denmark got 184 votes and Greece got 182 votes.

- ❖ The UNSC has a total of 15 member countries, of which 5 are permanent and 10 are temporary. The permanent members include the United States, Britain, France, Russia, and China. 10 temporary members are elected to the UNSC for 2 years.

New Army Chief of Indian Army

- ❖ Lieutenant General Upendra Dwivedi has recently been appointed as the new Army Chief of the Indian Army. He has replaced the current Army Chief General Manoj Pandey.
- ❖ He was previously serving as the Vice Chief of Army Staff and has also served in various important positions before this.
- ❖ Lieutenant General Dwivedi also served in Somalia Headquarters UNOSOM II in his career and also served as a military advisor to the Seychelles government.
- ❖ General Dwivedi has attended high-level courses at Defense Services Staff College, Wellington and AWC, Mhow. He has 40 years of experience in the armed services and has made significant contributions in various fields of the Indian Army and has been honored for his unique contribution.

India to host Hockey Men's Junior World Cup 2025

- ❖ The International Hockey Federation (FIH) in Switzerland has selected India as the host country for the Hockey Men's Junior World Cup 2025.
- ❖ India has previously hosted the Hockey Men's Junior World Cup three times - in Delhi in 2013, Lucknow in 2016 and Bhubaneswar in 2021.
- ❖ This time the World Championship will have 24 teams for the first time. The World Championship will start from December 2024.
- ❖ The last Hockey Men's Junior World Cup was held in Malaysia, which was won by Germany.

Pema Khandu: Chief Minister of Arunachal Pradesh

- ❖ Pema Khandu has recently taken oath as the Chief Minister of Arunachal Pradesh. He is a prominent leader of the Bharatiya Janata Party (BJP) and has held this post earlier.
- ❖ Khandu was born on 21 August 1979 and is the son of late Chief Minister Dorjee Khandu.
- ❖ In 2016, he took over as Chief Minister when Nabam Tuki resigned from the post. Under his leadership, the state has carried out several important development projects, including improvements in infrastructure, education and health services.
- ❖ Khandu's political journey began after his father's demise in 2011. After becoming an MLA, he served in various ministries. Peace and stability prevailed during his tenure, which increased investor confidence in the state.

Ajit Doval re-appointed as National Security Advisor

- ❖ Ajit Doval was appointed as National Security Advisor (NSA) by the Central Government. This is his third tenure as NSA.
- ❖ Ajit Doval was born on 20 January 1945 in Pauri Garhwal, Uttarakhand. He is a 1968 batch IPS officer and started his career by joining the Intelligence Bureau (IB) in 1972.
- ❖ He was awarded the Kirti Chakra for gallantry in 1988.
- ❖ Ajit Doval is the youngest officer to receive the Indian Police Medal.

Miyawaki Plantation

To achieve the goal of enhancing green cover along National Highways, the National Highways Authority of India (NHAI) will implement Miyawaki plantations on plots adjacent to these highways at various locations. NHAI has identified over 53 acres of land in and around Delhi-NCR for this initiative.

About Miyawaki plantation:

- ❖ The Miyawaki plantation, also known as the Miyawaki method, is a unique approach from Japan focused on ecological restoration and afforestation.
- ❖ This method aims to rapidly establish dense, native biodiversity forests. These forests not only enhance biodiversity but also play a crucial role in retaining groundwater and replenishing groundwater levels.
- ❖ Key to the success of the Miyawaki method is the planting of indigenous plant species that are well adapted to local climate and soil conditions. This ensures faster growth rates and the development of plantations that serve as effective sound and dust barriers.

Ramoji Rao

Ramoji Rao, the head of ETV Network and the founder of Hyderabad's Ramoji Film City, passed away recently at the age of 87.

About Ramoji Rao:

- ❖ Cherukuri Ramoji Rao was born on November 16, 1936, in Pedaparupudi, Andhra Pradesh, into a farmer's family. On August 10, 1974, he founded the Telugu daily Eenadu in Visakhapatnam. The newspaper quickly gained popularity and became a leading publication within four years.
- ❖ Rao also founded Ramoji Film City, the world's largest film studio, and headed the ETV Network of television channels.
- ❖ Additionally, he served as the Chairman of the Margadarshi Group of Companies. In 2016, Mr. Rao was awarded the Padma Vibhushan, India's second-highest civilian award, by then-President Pranab Mukherjee.
- ❖ On June 12, Telugu Desam Party (TDP) supremo Chandrababu Naidu became the 24th Chief Minister of Andhra Pradesh. Governor Abdul Nazir administered the oath to the CM and ministers at Kesarpalli IT Park in Vijayawada.

Chandra Babu Naidu becomes the Chief Minister of Andhra Pradesh

- ❖ Chandra Babu Naidu has recently been elected as the Chief Minister of Andhra Pradesh, setting a record for holding the position the most number of times in the state's history. Meanwhile, Janasena chief and actor Pawan Kalyan took oath as Deputy Chief Minister.
- ❖ The results of the assembly elections were announced alongside the Lok Sabha elections in Andhra Pradesh on June 4.
- ❖ The NDA has won 164 out of 175 seats in the assembly. In this, Naidu's TDP got 135, Pawan Kalyan's Janasena got 21 and BJP got 8 seats.
- ❖ The new government will have 25 members including the CM and Deputy CM. The list of ministers includes 8 from backward class, 3 from Scheduled Caste and 1 from Scheduled Tribe.
- ❖ Prime Minister Narendra Modi, Amit Shah, NDA ministers and Chief Ministers of other states were present at the oath taking event.

Iberian lynx

The Iberian Lynx, one of the world's rarest cat species, has shifted from the status of endangered to vulnerable on the International Union for Conservation of Nature (IUCN) 's red list.

About Iberian Lynx:

- ❖ Iberian Lynx is one of two carnivore species endemic to Europe (the other being European mink, *Mustela lutreola*).
- ❖ This species, like other cat species, is sexually dimorphic (systematic difference in form between individuals of different sex in the same species), with males being heavier and longer than females.
- ❖ This lynx is generally nocturnal and its activity patterns are closely synchronized with those of their major prey, the rabbit.
- ❖ The species, known for its pointy ears, long legs, and leopard-like spotted fur, was on the brink of extinction just two decades ago. This was due to poaching, road accidents, and a dramatic decline in wild rabbit numbers, the lynx's main prey, caused by disease.
- ❖ When the first census of the spotted nocturnal cat was carried out in 2002, there were fewer than 100 specimens in the Iberian Peninsula.

Conservation status:

- ❖ IUCN Red list: Vulnerable
- ❖ CITES: Appendix II

Mohan Charan Majhi took oath as the 15th Chief Minister of the Odisha

- ❖ The BJP government was formed for the first time in Odisha, with Mohan Charan Majhi becoming the Chief Minister on 12 June. Governor Raghuvardas administered the oath of office to Majhi, with Prime Minister Narendra Modi present at the ceremony.
- ❖ Mohan Charan Majhi, 52, took oath as the 15th Chief Minister of the state. Additionally, Kanak Vardhan Singhdeo and Prabhati Parida were sworn in as Deputy Chief Ministers.
- ❖ This election marks the return of a tribal Chief Minister in Odisha after 24 years, following Hemanand Biswal of Congress, who was the first tribal CM, and Giridhar Gamang, the second.
- ❖ The BJP secured a majority in the Odisha Assembly elections for the first time, winning 78 out of 147 seats. Naveen Patnaik's Biju Janata Dal (BJD) won 51 seats, Congress secured 14, CPI(M) got 1, and other parties won 3 seats.

India-Japan Joint Military Exercise

- ❖ The Indian Navy's indigenous stealth frigate INS Shivalik recently arrived in Yokosuka, Japan, for the 8th edition of the bilateral Japan-India maritime military exercise, 'JIMEX 24.'
- ❖ This exercise includes both port and sea phases. Japan's guided missile destroyer JS Yugiri will participate, along with integral helicopters from both navies.
- ❖ The 'JIMEX' exercise, which started in 2012, aims to enhance interoperability between the two navies.
- ❖ Stealth frigates like the INS Shivalik are called advanced ships as they are capable of moving at high speeds and are difficult to detect with radar.

Paraguay: 100th country to join ISA

- ❖ Paraguay recently became the 100th member country to join the International Solar Alliance (ISA).

About International Solar Alliance:

- ❖ Launched on November 30, 2015, during COP21 in Paris by Prime Minister Narendra Modi and French President Emmanuel Macron, ISA is an international alliance comprising countries between the Tropic of Cancer and the Tropic of Capricorn.
- ❖ It aims to catalyze advancements in the field of solar energy. The ISA headquarters is situated in Gurugram, Haryana.

T20 World Cup 2024

India recently won the T20 World Cup 2024 title by defeating South Africa by 7 runs. The team captain was Rohit Sharma and the team was coached by former cricket player Rahul Dravid.

About ICC Men's T20 World Cup:

- ❖ The ICC Men's T20 World Cup is the ninth edition of the biennial Twenty20 International (T20I) tournament, organized by the International Cricket Council (ICC) and contested by men's national teams.
- ❖ Co-hosted by the West Indies and the United States, the tournament took place from June 1 to 29, 2024.
- ❖ Up to 2024, a total of eight T20 World Cup tournaments have been played, with 21 teams participating.
- ❖ Only the West Indies and England have won the T20 World Cup championship twice. Now India has become the third country to achieve this benchmark.

European Union passes Nature Restoration Law

The Environmental Council of the European Union (EU) has recently approved the Nature Restoration Law. EU environment ministers voted in favor of the law during a live-streamed session. This law will apply to all 27 member countries of the EU and has been enacted to protect the environment.

About Nature Restoration Law:

- ❖ The Nature Restoration Law aims to regrow forests and ensure that swamps and rivers have sufficient natural water. The law sets a target to restore at least 20% of the total land and sea area of the EU by 2030 and to conserve all ecosystems by 2050.
- ❖ 20 member countries of the European Union voted in favor of the law. These countries represent 66% of the population of EU countries.
- ❖ According to the EU, approximately 80% of the natural habitat in member countries and 10% of bee and butterfly species are on the verge of extinction. Additionally, 70% of the soil in EU countries is reported to be in unhealthy condition.

Neeraj Chopra won gold at Paavo Nurmi Games

- ❖ On June 18, world champion Neeraj Chopra won the gold medal in the Men's Javelin Throw event at the World Athletics Continental Gold Tour 2024 in Turku, Finland.
- ❖ The championship took place at the Paavo Nurmi Stadium, where he achieved a throw of 85.97 meters. Despite lagging behind in the second throw, Neeraj made a strong comeback later in the competition.
- ❖ Tony Keranen won the silver medal by finishing second with a throw of 84.19 meters.
- ❖ Olivier Helander won the bronze medal with his best throw of 83.96 meters.
- ❖ Neeraj Chopra will also participate in the Paris Olympic Games to be held from 26 July to 11 August.

India: The third largest domestic airline market in the world

- ❖ According to data from aviation analysis firm OAG, India has become the third largest domestic airline market globally, surpassing Brazil. India now has a capacity of 1.55 crore passengers on domestic routes, a significant increase from 79 lakh passengers a decade ago.
- ❖ In terms of domestic airlines, America holds the first position followed by China as the second largest market.
- ❖ Over the past decade, India has shown a robust average annual increase in air seats at 6.9%, the highest among the top 5 countries. By comparison, America averages 2.4% and Indonesia averages 1.1% growth in the same period.

- ❖ IndiGo has been the largest airline in India since 2014, with the highest annual passenger growth rate of 13.9% on domestic routes. The Mumbai-Delhi route remains the 8th busiest globally, servicing over 6.6 lakh seats.
- ❖ According to the report, India's domestic airline capacity is projected to grow at an average annual rate of 8.7% from 2005 to 2024, exceeding the world average of 6%.

Kozhikode: India's first 'City of Literature'

- ❖ On June 23, Kerala's Self-Government Minister MB Rajesh announced that Kozhikode, located on the coast of the Arabian Sea, has been granted UNESCO's prestigious 'City of Literature' status.
- ❖ With a literacy rate of 96.8%, Kozhikode becomes India's first city to receive this recognition from UNESCO.
- ❖ The name 'Kozhikode' is derived from 'koil-kota' meaning 'fortified palace'.
- ❖ The city hosts the annual 'Kerala Literature Festival' and is the second largest in Kerala. It was formerly known as Calicut.

Arundhati Roy won the PEN Pinter Prize 2024

- ❖ On June 27, the British Library announced Indian writer Arundhati Roy as the recipient of the PEN Pinter Prize 2024. Established in 2009 in memory of Nobel Prize-winning playwright Harold Pinter, this prestigious award will be presented to Arundhati Roy on October 10, 2024.
- ❖ Arundhati Roy, born on November 24, 1961, in Meghalaya, gained international acclaim when she received the Booker Prize in 1997 for her debut novel 'The God of Small Things'.
- ❖ She received an advance of one million pounds (approximately Rs 8 crore) for the novel, which was published in May and quickly became a bestseller in 18 countries by June. By the end of the year, TIME magazine recognized it as one of the top five bestselling books.
- ❖ The PEN Pinter Prize is awarded annually to literary writers residing in the United Kingdom, Ireland, or Commonwealth Nations.

Mark Rutte: Next Secretary General of NATO

- ❖ On June 26, the North Atlantic Treaty Organization (NATO) appointed Netherlands Prime Minister Mark Rutte as the next Secretary General. His appointment was approved by NATO ambassadors at the alliance's headquarters in Brussels, which comprises 32 member nations.
- ❖ Mark Rutte, born on February 14, 1967, in the Netherlands, has served as the Prime Minister of the Netherlands since 2010.
- ❖ He is set to assume the role of NATO Secretary General on October 1, 2024, succeeding former Norwegian Prime Minister Jens Stoltenberg, who held the position since 2014.

About NATO:

- ❖ NATO, founded in 1949 with headquarters in Brussels, Belgium, is a military alliance comprising 32 member countries, including the US and Britain.
- ❖ The alliance was established to counter the influence of the Soviet Union, and it operates under the principle of collective defense, whereby an attack on any member country is considered an attack on all.

One Liners

1. The Reserve Bank of India (RBI) revised the SAARC Currency Swap Framework for 2024-2027, aimed at providing a backup line of credit for member countries to meet any balance of payments and liquidity crises.
2. The Pench Tiger Reserve in Maharashtra launched an AI-enabled fire detection system, aimed at detecting forest fires at an early stage and preventing damage to the ecosystem.
3. Om Birla was re-elected as the Speaker of the Lok Sabha (Lower House of Parliament) for a second consecutive term.
4. Mazagon Dock Shipbuilders Limited (MDL) received Navratna status, which is a prestigious designation given to public sector undertakings (PSUs) in India that have demonstrated excellence in their performance.
5. June 27 is celebrated as MSME Day globally to raise awareness about the importance of small and medium-sized enterprises in the global economy.
6. June 28 is observed as National Insurance Awareness Day in India to educate people about the importance of insurance in financial planning.
7. Rohit Sharma became the most successful captain in T20 international cricket, surpassing the record previously held by Pakistan's Babar Azam.
8. Booker Prize-winning author Arundhati Roy was awarded the PEN Pinter Prize for her work highlighting the struggles of the marginalized and oppressed.
9. Rahul Gandhi has been chosen as the Leader of the Opposition in the Lok Sabha, where he will lead the opposition against the ruling government.
10. Julian Assange, the founder of WikiLeaks, has been released from Belmarsh prison in the UK.
11. Kozhikode in Kerala has been officially recognized as India's first UNESCO 'City of Literature'.
12. India has been ranked 129th out of 146 countries in the 2024 Global Gender Gap Index.
13. Bhartruhari Mahtab, a seven-time Member of Parliament, was sworn in as pro-tem Speaker for the 18th Lok Sabha.
14. JP Nadda, the Union Health Minister, has been appointed as the Leader of the House in the Rajya Sabha.
15. Australian cricketer Pat Cummins achieved a historic milestone by becoming the first bowler to take two hat-tricks in the T20 World Cup.
16. The world celebrated the 10th International Day of Yoga, promoting physical and mental well-being. The theme was "Yoga for Self and Society".
17. Globally acclaimed film-maker Vinod Ganatra has become the first Indian to be conferred the prestigious 'Nelson Mandela Lifetime Achievement Award'.
18. Neeraj Chopra, India's Olympic gold medalist, secured another gold medal at the 2024 Paavo Nurmi Games.
19. World Blood Donor Day was celebrated on June 14, recognizing the selfless contributions of voluntary blood donors worldwide.
20. Pema Khandu took oath as chief minister of Arunachal Pradesh for the third successive term.
21. Ajit Doval has been reappointed as the National Security Advisor and PK Mishra as the Principal Secretary to the Prime Minister.
22. Saudi Arabia has decided not to renew its 80-year petrodollar deal with the United States. This agreement, originally signed on June 8, 1974, had been a key part of US global economic influence.
23. Lt Gen Upendra Dwivedi has been appointed as Chief of the Indian Army, a crucial appointment for the country's military leadership.
24. Spain's Carlos Alcaraz Garfia grabbed his first-ever French Open Men's singles title.
25. Iga Swiatek of Poland triumphed over Jasmine Paolini of Italy at Roland Garros in French open game.
26. Sumit Nagal emerged victorious in the Heilbronn Neckarcup Challenger tennis tournament held in Germany, a

notable achievement in his career.

27. Puja Tomar, from Uttar Pradesh, India, has achieved a historic milestone by becoming the first-ever Indian to win a bout at the Ultimate Fighting Championship (UFC).
28. UAE President Sheikh Mohamed bin Zayed Al Nahyan awarded the First-Class Medal of Independence to Jose Aguero Avila, Ambassador of the Republic of Paraguay to the UAE, on the occasion of the end of his tenure as ambassador to the country.
29. Recently, the 6th Meeting of India-Japan Joint Working Group on Counter-Terrorism took place in New Delhi.
30. The International Monetary Fund (IMF) just released a full Artificial Intelligence Preparedness Index (AIPI) Dashboard.
31. Claudia Sheinbaum of the Morena party was elected as Mexico's first woman president.
32. PV Sindhu became the brand ambassador for Greenday's 'Better Nutrition'.
33. Nokia and Gati Shakti Vishwavidyalaya collaborated on 5G/6G research.
34. The Ministry of Defense has joined hands with the Union Ministry of Health and Family Welfare to set up a dedicated Tele Manas cell for the armed forces.
35. Goldman Sachs raised India's GDP growth forecast for 2024 to 6.9%.
36. SEBI launched the "Saathi 2.0" app for investors.
37. The International Day of Innocent Children Victims of Aggression was observed on June 4, 2024.
38. World Environment Day was celebrated on June 5, 2024. The theme for World Environment Day 2024 was indeed "Our Land. Our Future. We are #GenerationRestoration" with a focus on land restoration, desertification, and drought resilience. The day was established in 1972 by the United Nations following the Stockholm Conference on the Human Environment.
39. Prime Minister Narendra Modi launched the 'Ek Ped Maa Ke Naam' campaign to commemorate World Environment Day.
40. The Central Board of Indirect Taxes and Customs (CBIC) Chairman, HRI Sanjay Kumar Agarwal, officially launched a GST Bhawan in Rohtak, Haryana.
41. India will host the 81st International Air Transport Association (IATA) Annual General Meeting (AGM) in 2025 in Delhi.
42. 12 countries signed the Zero Debris Charter, led by the European Space Agency (ESA), to achieve debris-neutral space activities by 2030.
43. The repo rate has been kept unchanged by the Monetary Policy Committee for the eighth consecutive time at 6.5%.
44. World Oceans Day was celebrated on June 8, 2024.
45. India, the United States, South Korea, Japan, and the European Union launched a Biopharmaceuticals Alliance.
46. Pakistan, Somalia, Panama, Denmark, and Greece secured seats on the United Nations Security Council to replace Japan, Malta, Mozambique, Ecuador, and Switzerland.
47. The main tunnel of the 900 MW Arun III Hydropower Project, being constructed with Indian assistance in Nepal, achieved a breakthrough.
48. The UN General Assembly (UNGA) elected former Cameroonian Prime Minister Philemon Yang as president of the 79th UNGA session.
49. The Reserve Bank of India (RBI) has initiated its third global hackathon, HaRBInger 2024.
50. Denmark emerged as India's third-largest export destination in 2023-24.
51. All India Bank Employees Association (AIBEA) launched an initiative for bank customer grievance redressal called Bank Aid.
52. DP Manu won gold medal in javelin throw at the Taiwan Athletics Open 2024.

53. Groundbreaking non-invasive heart surgery on a dog took place in Mumbai.
54. A distinct, blue-colored ant species was discovered in Arunachal Pradesh.
55. Virat Kohli was appointed as the brand ambassador for Tobacco Control by the Ministry of Health and Family Welfare, Government of India.
56. Sumit Nagal clinched the Heilbronn Neckarcup Challenger in Germany.
57. Dubai's Indian Business and Professional Council has partnered with National Payments Corporation of India and Reserve Bank of India to highlight advances in digital payments and currency settlement mechanisms.
58. An Indian tripartite delegation has participated in the 112th session of International Labour Conference (ILC) in Geneva, Switzerland.
59. June 13 marks the annual observance of International Albinism Awareness Day.
60. The United Nations General Assembly declared 2025 as the International Year of Quantum Science and Technology.
61. India's consumer price index inflation dropped to a 12-month low of 4.75% in May 2024.
62. Adani Defence and Aerospace announced a strategic cooperation agreement with UAE-based EDGE Group.
63. Visakhapatnam Port Authority secured the 18th position in the World Bank's Container Port Performance Index.
64. India and UAE introduced the Local Currency Settlement System (LCSS) to transform their economic relations.
65. The National Commission for Indian Medical Systems organized a two-day National Conference to mark its fourth foundation.
66. The 8th Japan-India Maritime Exercise (JIMEX-24) has started in Yokosuka, Japan. The exercise will be conducted in two phases: the Harbour Phase and the Sea Phase.
67. Chandrababu Naidu was sworn in as the 18th CM of Andhra Pradesh, and Pawan Kalyan took oath as the Deputy CM.
68. Harsh Pati Singhanian was elected as the First Vice-Chair of the International Chamber of Commerce.
69. The Assam Cabinet has launched the Assam Witness Protection Scheme, 2024 to counteract the increasing number of threats faced by witnesses in court cases.
70. Ahmedabad-based Physical Research Laboratory (PRL) has discovered three craters on the surface of Mars, named 'Lal', 'Mursan' and 'Hilsa'.
71. The two-day India-IORA Cruise Tourism Conference concluded in New Delhi.
72. Assam government has launched the Mukhya Mantri Nijut Moina (MMNM) scheme to promote girl education and address the issue of child marriage in the state.
73. India's Likith SP and Dhinidhi Desinghu bagged two bronze medals in Singapore National Swimming Championship 2024.
74. India's Divya Deshmukh won the World Junior Girls' Chess Championship.
75. Vice President Jagdeep Dhankhar inaugurated 'Prerna Sthal', a site with statues of national icons and freedom fighters, in the Parliament House Complex.
76. Kerala's Kozhikode is hosted Malabar River Festival 2024, featuring the International White Water Kayaking Championship.
77. India has achieved a significant capabilities with the induction of the indigenous Nagastra-1 kamikaze drones developed by Solar Industries, Nagpur.
78. The Reserve Bank of India (RBI) was awarded the prestigious "Risk Manager of the Year Award 2024" by Central Banking, a renowned publication headquartered in London.
79. IUCN changed Iberian lynx's status to 'vulnerable' from 'endangered'.
80. United Nations Public Service Day was celebrated on June 23, 2024.

Mains Special: History + Art & Culture

1. **What is the significance of Geo-heritage Sites and Geo-relics, and how does the draft Geo-heritage Sites and Geo-relics (Preservation and Maintenance) Bill, 2022 contribute to the conservation of the natural wealth found in Geo-heritage Sites and Geo-relics?**

Answer:

Introduction

Geo-heritage refers to geological features that are inherently or culturally significant, offering insights into the Earth's evolution, history, and scientific education. The Geological Survey of India (GSI) is the parent body responsible for identifying and protecting geo-heritage sites and national geological monuments in the country. Geo-relics are defined as "relics or materials of geological significance or interest, such as sediments, rocks, minerals, meteorites, or fossils." The GSI is empowered to acquire geo-relics for preservation and maintenance purposes.

Background

- o The Geological Survey of India (GSI), established in 1851 under the Ministry of Mines, conducts regional-level exploration to investigate and assess coal and other mineral resources in the country.
- o It designates geo-heritage sites and national geological monuments and collaborates with state governments to implement necessary measures for their protection.
- o These 32 geo-heritage sites are distributed across 13 states and encompass diverse locations, including Fossil Parks (e.g., Siwalik Fossil Park in Himachal Pradesh), Geological Marvels (e.g., Lonar Lake in Maharashtra), and Rock Monuments (e.g., Peninsular Gneiss in Karnataka).
- Features of the Geo-heritage Sites and Geo-relics (Preservation and Maintenance) Bill, 2022
 - o The proposed bill authorizes the Central Government to declare a geo-heritage site as nationally significant, operating under the provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement Act, 2013 (RFCTLARR Act).
 - o Through a public notification in the Official Gazette, the government specifies the areas subject to acquisition, allowing objections to be raised within two months.
 - o Compensation is provided to landowners or occupants who suffer losses or damages due to the exercise of powers under this act, with the market value determined in accordance with the principles outlined in the RFCTLARR Act.
 - o The bill enforces a prohibition on construction, reconstruction, repair, or renovation of any buildings within the geo-heritage site area, unless it is for preservation, maintenance, or essential public works.
 - o Penalties are specified for destruction, removal, defacement, or violation of any directives issued by the Director General of GSI within the geo-heritage site. Violations may result in imprisonment for up to six months, a fine of up to Rs.5 lakh, or both. In cases of continued contravention, an additional fine of up to Rs.50,000 per day may be imposed.

Criticism

- While the need for preserving such sites and enacting specific laws has long been recognized, concerns have been raised regarding the distribution of power outlined in the bill.
- Guntupalli V R Prasad, a paleontologist from the University of Delhi who recently led a team that discovered titanosaur nests in Madhya Pradesh, stated, "The GSI has been given sweeping powers." These powers 'disregard the central role' that other players have had in identifying and studying geo-heritage treasures and will 'effectively sound the death knell' for research activities by non-GSI researchers.
- Researchers fear GSI's monopoly will increase red tape and infringe on the autonomy of researchers at universities and research institutes as well as private collectors.
- The issue of land acquisition for the purpose of safeguarding these sites (as GSI have given power regarding control over sites of geological importance and their acquisition) could potentially lead to conflicts with local communities as it had been witnessed in passed in many cases of land acquisition by government authorities which resulted in local community's agitation against government.

Conclusion

Experts advocate for the establishment of a more inclusive body, similar to a National Geo-heritage Authority, which can democratically determine the locations of "geohistorical" significance and devise

effective preservation strategies.

2. Elaborate on the local administration of the Cholas as known from the Uttiramerur inscription.

Answer:

Introduction:

India, often regarded as the world's oldest democracy, holds a prominent place in the history of democratic governance. Evidence of this can be found in the Uttiramerur inscription, an 1,100-year-old inscription from Tamil Nadu, which sheds light on the local democracy and administration during the Chola dynasty. Prime Minister Modi recently emphasized the significance of this inscription, underscoring India's deep-rooted democratic heritage.

Body:

The following have been known about the Chola local administration from the Uttiramerur inscription:

- The Chola empire consisted of two types of villages: those with diverse caste populations and those settled by Brahmins known as *agrahara* villages.
- The assembly governing the caste-based villages was called the “*ur*,” while the *agrahara* villages had an assembly known as the “*Sabha*” or “*mahasabha*.”
- The *agrahara* villages enjoyed a considerable degree of autonomy, with their affairs managed by an executive committee. Committee members were elected through random selection or rotation among educated property owners.
- The Uttiramerur inscription, dating back to the period of Parantaka I, provides detailed information about the formation and functions of village councils.
- Each village was divided into thirty wards, and members were nominated from each ward to form the village council.
- Eligibility criteria for ward membership included land ownership, a personal residence, age between thirty and seventy, and knowledge of the Vedas.
- Disqualifications for membership included previous committee membership, failure to submit accounts, engagement in sinful activities, or theft.
- The selection process involved writing the names of eligible individuals on palm leaves and drawing them from a pot using the *kudavolai* system.
- The inscription also outlines various committees within the *sabha*, each with specific duties. These committees were responsible for different aspects of village administration, and their members convened to pass resolutions.
- Committee members served for 360 days before retiring. Those implicated in wrongdoing or discrepancies in accounts were immediately removed, and individuals involved in crimes such as forgery faced punishment, such as riding a donkey.

Conclusion:

The Chola administration's approach to governance granted significant autonomy to village councils and committees. The Uttiramerur inscription provides valuable insights into the ancient and medieval period's local decentralization and effective governance, showcasing the indigenous development of democratic principles in India.

3. Examine the evolving significance of nature worship in Indian history, with its origins dating back to the Indus Valley Civilization. Provide examples to support your answer.

Answer:

Introduction:

Religion has played a significant role in shaping the moral and ethical values of Indian society throughout history. The diverse religious beliefs, ideas, and practices have undergone transformations and developments over time, with nature worship holding immense importance in this context.

Body:

1. Indus Valley Civilization:

- Worship of trees and animals was prevalent.
- The Earth was seen as a fertility goddess, similar to the worship of the Nile goddess Isis in Egypt.
- Terracotta figurines depict women with plants growing out of their embryos, symbolizing the connection between nature and life.

2. Pre-Vedic and Vedic Religion:
 - People worshipped forces of nature like the sun and the moon.
 - The Rig Veda reveals beliefs in multiple gods such as Indra, Varuna, Agni, Surya, and Rudra.
 - Sacrifices and ritual offerings to fire were common religious practices.
 - The Sama Veda and Yajurveda elaborated on the different aspects of sacrificial acts.
 - Ritualism was further elaborated in the Brahmanas.
3. Nature worship in contemporary times:
 - Jainism accorded importance to even insects, practicing non-violence by avoiding harm to tiny creatures.
 - Animals represented desirable characteristics and natural cycles.
 - Ecological importance of certain creatures was acknowledged and institutionalized in religions like Hinduism, Jainism, and Buddhism.
 - Sacred plants like Tulsi, Peepal, and Bel are worshipped.
 - Sacred groves, protected forest tracts deemed sacred by local communities, exist in India.
 - Environmental movements like the Chipko movement and the sacrifices of the Bishnoi sect reflect the commitment to protect nature.
4. Connection to Indian culture and psyche:
 - Deep connection to nature is integral to Indian lifestyle.
 - Rituals such as sun worship and the Pooja of Tulsi demonstrate this connection.
 - Symbolic nature worship continues to be a vital aspect of Indian culture.

Conclusion:

Nature worship is deeply ingrained in the Indian lifestyle and psyche. Indians maintain a profound connection with nature, evident in rituals like sun worship in the morning and evening, as well as the reverence for sacred plants. Although the practice of nature worship has evolved symbolically over time, it remains a vital aspect of Indian culture.

4. **In spite of sharing similarities, Buddhism and Jainism possess fundamental differences in their philosophies that distinguish them as distinct religions. Explore and analyze the commonalities and disparities between these two belief systems.**

Answer:

Introduction

The sixth century B.C. is regarded as a remarkable period in history, as it witnessed the presence of influential thinkers such as *Buddha*, *Mahavira*, *Heraclitus*, *Zoroaster*, *Confucius*, and *Lao Tse*, who preached their ideas during this era. Among them, Jainism and Buddhism emerged as the most successful, leaving a profound impact on Indian society.

Body:

Similarities between Buddhism and Jainism:

The Rise of the Religions: Both Jainism and Buddhism gained popularity due to the religious unrest in 6th century B.C. India. The complex rituals and sacrifices advocated in the Later Vedic period were not embraced by the common people.

Core Philosophy: Jainism emphasizes the *triratnas*, which include *right faith, knowledge, and conduct*. Similarly, Buddhism promotes the *eightfold path*, which encompasses *these three aspects, along with right speech, resolve, occupation, and more*.

Ahimsa: Both religions uphold *non-violence* as a fundamental principle of life.

Sangha: Mahavira established the *Sangha* to propagate his teachings, while *Buddha* had two types of followers - monks (*bhikshus*) and lay worshippers (*upasakas*). The monks were organized into the Sangha to disseminate Buddha's teachings.

Equality: Both Jainism and Buddhism welcomed both men and women into their sanghas.

Differences between Buddhism and Jainism:

Asceticism and Renunciation: Jainism took the practices of *asceticism and renunciation to extreme levels, including self-torture, starvation, and nudity*. In contrast, *Buddhism did not advocate such extremes. Buddhism showed a middle path in every aspect of social and spiritual conduct*.

Perception of Agriculture: Jainism considered agriculture as a sinful act, as it caused harm to the earth, worms, and animals. In Buddhism, there was *no such prohibition* or distinction.

Attitude towards the Caste System: While *Buddhism openly challenged the caste system, Jainism did not explicitly attack it*. However, Mahavira opposed social distinctions and welcomed people from all backgrounds into his order.

Language: *Prakrit was the primary language through which Jainism was preached, while Pali and other local languages developed through the teachings of Buddhism.*

Social vs. Religious Revolution: Buddhism had a stronger focus on *social reform*, teaching practical ethics and advocating for social equality. Jainism, on the other hand, remained more rooted in its *religious context*.

Spread beyond the Subcontinent: Through Emperor *Asoka's missionary efforts, Buddhism expanded into West Asia and Ceylon*, transforming it from a local religious sect to a global religion. Jainism, in contrast, remained *largely confined to the Indian subcontinent*.

Conclusion:

Buddhism and Jainism provided people with an alternative to the regressive religious practices and rituals of their time. They became beacons of hope for the marginalized and oppressed. Thus, while many similarities can be observed between the two religions, there exist subtle differences as well.

5. Elaborate the relevance of Gandhiji's vision as a potential solution to global challenges amidst the evolving global landscape.

Answer:

Introduction:

Gandhiji, a philosopher, political activist, and writer, revolutionized the concept of a philosophical way of life. His profound ideas place him in the ranks of eminent philosophers such as the Buddha and Socrates. Gandhi's strategy encompassed truth, sacrifice, non-violence, selfless service, and cooperation. His influential role in India's struggle for independence shaped the nation's governance and left a lasting impact on its leaders.

Body:

Gandhian principles and approach:

- **Non-violence and Truth:** The significance of these principles has amplified in the present times. Truth has the power to dispel hate speech and fake news, which often lead to violent incidents like mob lynching. Non-violence, on the other hand, acts as a preventive measure against such incidents and helps maintain harmony within communities, as demonstrated during the Delhi riots in February 2020.
- **Satyagraha:** Gandhi referred to his method of nonviolent action as Satyagraha, wherein the purest soul-force is employed against injustice, oppression, and exploitation. It emphasizes securing rights through personal suffering rather than causing harm to others. Adhering to non-violent Satyagraha, as witnessed during the Non-cooperation and Civil disobedience movements of the freedom struggle, could have prevented instances of violence like the Republic Day clashes during farmer protests in 2021.
- **Trusteeship:** Gandhi's socio-economic philosophy of trusteeship proposed that the wealthy act as trustees of trusts that promote the welfare of the general population. Embracing this approach bridges the gap between the rich and the poor, fostering a more equitable society where individuals consider themselves trustees and extend support to those in need.

Relevance in contemporary times:

- **World Peace:** Non-violence, a fundamental aspect of Gandhianism, served as a powerful weapon during India's freedom movement against British rule. Applying this principle in current global conflicts, such as the situation between Russia and Ukraine, could potentially prevent wars and promote peaceful resolutions.
- **Courage and Tolerance:** Gandhiji believed that non-violence and tolerance require great courage and patience. In a world grappling with violence and terrorism, emphasizing Gandhian principles of non-violence becomes increasingly vital. These principles can counteract the prevalent culture of aggression and foster a more peaceful and tolerant society.
- **Classless Society:** India continues to grapple with the persistence of the caste system, highlighting the relevance of Gandhi's philosophy in establishing a casteless society where every individual is treated equally, regardless of their caste. The vision of a classless society is also applicable in addressing

issues of racism in the Western world and caste-based violence in India, showcasing the need for Gandhi's inclusive ideals.

- **Gandhian Socialism:** Gandhian socialism goes beyond politics and focuses on social aspects. Gandhiji envisioned a society free from poverty, hunger, unemployment, and inequality in access to education and healthcare. These values promote social harmony, reducing conflict and leading to prosperity for all.
- **Disarmament:** Gandhi's emphasis on non-violence and peace can serve as a foundation for disarmament efforts. His teachings promote resolving conflicts through dialogue, negotiation, and non-aggressive means. By adopting his principles, nations can work towards disarmament and allocate resources for human development rather than military expenditures.
- **Climate Change:** Gandhi's advocacy for sustainability and reverence for nature aligns with addressing climate change. His teachings encourage a harmonious relationship with the environment and promote responsible consumption. Implementing his principles can lead to sustainable practices, conservation efforts, and the transition towards clean and renewable energy sources.
- **Ethnic Conflicts:** Gandhi's philosophy of unity, tolerance, and understanding can be instrumental in addressing ethnic conflicts. His teachings promote dialogue, respect for diversity, and the pursuit of justice. By adopting his principles, societies can work towards reconciliation, bridge divides, and create inclusive environments where all communities can coexist peacefully.
- **Poverty:** Gandhi's teachings emphasize the importance of social justice and the eradication of poverty. His vision of "Gram Swaraj" (village self-governance) highlights the need for equitable distribution of resources and empowering marginalized communities. By implementing his teachings, societies can strive for inclusive development, poverty alleviation programs, and fair economic systems.
- **Other Global Issues:** Gandhi's principles of truth, compassion, and ethical conduct can be applied to a wide range of global issues. His teachings inspire individuals and communities to take personal responsibility, promote human rights, combat corruption, and work towards social upliftment.

Conclusion:

Gandhi's ideologies continue to serve as guiding principles for individuals worldwide and Indian policymakers alike. From initiatives aimed at poverty alleviation, such as Sarva Shiksha Abhiyan (Education for All) and Ayushman Bharat (Universal Health Care), to programs like Skill India, Gandhianism remains a core inspiration. Embracing the essence of Gandhi's teachings is essential in addressing contemporary global challenges and nurturing a more harmonious and inclusive world.

6. Elaborate on the contributions of over four million British Indian troops in both World Wars and their significant role in various war theatres.

Answer:

Introduction:

A memorial dedicated to the British Indian Army is being constructed in Glasgow, Scotland, marking the first permanent memorial wall in Scotland to honour the millions of Indian soldiers who fought for the British during both World Wars. This memorial aims to acknowledge and commemorate the invaluable service and sacrifices made by the British Indian Army.

Body:

Contributions of Indian Soldiers in World War I:

- British Indian Army contributed significantly to the European, Mediterranean, and Middle Eastern theatres of World War I, playing a vital role in the victory of the Allied powers.
- Approximately 1.5 million Indian men, representing different religious and regional backgrounds, volunteered in the Indian Expeditionary Force.
- Indian soldiers fought bravely and selflessly, with over 70,000 fatalities and 67,000 wounded.
- They received numerous accolades, including 11 Victoria Crosses, the highest military decoration in the British Empire.
- India also provided essential equipment, materials, and animals during the war.
- Indian troops served in various regions, including France, Belgium, Mesopotamia, Egypt, Sinai, Gallipoli, and German East Africa.
- Despite their contributions, India was denied its promise of self-rule after the war, and repressive measures like the Rowlett Act were imposed.

- A few well of the soldiers in World War I include, Arsal Khan, Awal Nur, Pratap Singh, etc.

Contributions of Indian Soldiers in World War II:

- Approximately 2.5 million Indian soldiers served in World War II.
- Indian troops fought alongside the Allies against the Axis powers, including Germany, Italy, and Japan.
- Over 36,000 Indian soldiers lost their lives, 34,000 were wounded, and 67,000 became prisoners of war.
- Indian soldiers played a crucial role in defending the Indian subcontinent from the advancing Japanese forces in South and Southeast Asia.
- They participated in campaigns across East and North Africa, Italy, Burma, Singapore, the Malay Peninsula, Guam, and Indo-China.
- The Indian Army, along with Nepali Gurkha troops, successfully repelled the Japanese advance in Burma and Northeast India.
- Indian Air Force pilots made significant contributions, and Indian doctors, nurses, and support personnel served in various locations.
- India supplied over 1.7 million food packets and essential supplies to soldiers and Asian prisoners of war.
- India even sent a doctor named, Dr. Dwarkanath Kotnis to China to aid the troops.

Conclusion:

The Indian Army's contributions in both World Wars were significant, with Indian soldiers displaying bravery and sacrifice throughout various theatres of war. However, their contributions have often been overlooked and under-recognized. The construction of the British Indian Army Memorial in Glasgow serves as a step towards honouring and remembering their invaluable service.

7. What is your opinion on whether the social reform movements of the 19th century displayed a fundamental contradiction between embracing modernity and seeking to revive the past grandeur of the country? Please provide your insights and comment on this issue.

Answer:

Introduction:

From the early 19th century, debates and discussions about social customs and practices took on a new character due to the development of new forms of communication. There was an *intrinsic dichotomy between reformist and revivalist ideas in the minds of the reformers*. A few were keen to spread knowledge of modernization, while others were interested in highlighting the past glory and customs.

Body:

Reformist view towards social reforms:

- Blind adherence to western ideology wasn't practiced, but rather reforming indigenous culture. Thus, *modernization was the aim of the reformers*.
- The movements believed in *rationalism and religious universalism*. A rational and secular outlook was more important to prevailing social practices. For example, *medical opinion was cited as an aid to oppose child marriage*.
- They used faith to challenge such practices. They referred to periods in the past where no such practices existed, but they used it as only an aid and an instrument. Thus, they wanted to prove that practices like *sati, child marriage, etc.*, were not sanctioned by religion.
- These movements contributed towards the *liberation of individuals from conformity* born out of fear and from uncritical submission to exploitation by the priests and other classes. *For example, the Brahmo Samaj and its variants*.
- Various agitations in all parts of India, *such as the Temple Entry Movement, aimed to achieve social equality between Dalits and upper castes* and also made efforts to treat Dalits in a more humane way. Narayan Guru from Kerala played a very important role who was fought against *caste injustice and social inequalities* prevalent in the society and gave a famous slogan "*One Caste, One Religion, One God for All*".

Revivalist view:

- The Theosophists advocated the revival and strengthening of the ancient religions of Hinduism, Zoroastrianism, Buddhism and Islam. They recognized the *doctrine of the transmigration of the soul*.
- The *Dharma Sabha in 1830, in order to counter the ideas of the Brahmo Samaj, advocated status quo*

and opposed the abolition of Sati.

- The Arya Samaj followed the motto “Go Back to Vedas” and the Shuddhi movement, whereas the Tabligh movement aimed to reach out to ordinary Muslims and revive their faith.
- Revivalist movements believed that *Western thinking and missionary propaganda would ruin Indian culture and ethos*, and thus there was a need to protect the religion.
- They were also influenced by the rich cultural heritage of India brought to light by Western scholars and found that it was even superior to Western culture.
- Wahabi movement was an Islamic revivalist movement which has the main objective to cleanse Islam and restore it to its fundamental and simple form.
- The tendency to look backwards, appeal to past greatness, and rely on scriptural authority.
- Appeals to past greatness created false pride and smugness, while the habit of finding a ‘Golden Age’ in the past acted as a check on the full acceptance of modern science and hampered the effort to improve the present.
- The evil aspects of this phenomenon became apparent when it was found that, along with a *rapid rise of national consciousness, another consciousness – communal consciousness – had begun to rise among the middle classes.*

Conclusion

Socio-religious reforms were a reaction against colonial judgment and native backwardness. The movement arose and declined but had a lasting impact on society and the public sphere of ideas. It helped *Indians to have comparatively more self-confidence, self-respect, and feelings of patriotism*. From these, humanity and morality among the common people spread, and the feelings of political freedom and modern development grew.

8. The tribal revolts and rebellions symbolize the contributions of unacknowledged heroes who played a significant role in raising the moral consciousness of the national movement through their collective experiences of colonial oppression. Evaluate with relevant Example.

Answer:

Introduction:

Prior to British influence, Tribals relied on forests for sustenance, including food, fuel, and fodder. They practiced shifting cultivation, such as “jhum” and “podu,” wherein they moved to fresh forest lands when their current lands became depleted. However, during 18th and 19th centuries, the colonial government brought about significant changes to these practices, that led to violent and terrified revolts by Tribes.

Body:

Causes of Tribal revolts and rebellions:

Imposition of Land Revenue Settlement: Factors such as famine, increased land revenue demands, and economic distress compelled the Chuar aboriginal tribesmen of the Jungle Mahal in Midnapore and Bankura districts (in Bengal) to take up arms.

British policies and acts: The establishment of the Forest department in 1864, Government Forest Act (1865), and Indian Forest Act (1878) restricted tribal activities in forest areas, provoking their resentment towards the British. Notably, the Koya revolt was sparked by the denial of tribal rights over forest areas.

Expansion of settled agriculture: British expansion into tribal territories triggered uprisings by the martial Pahariyas of the Raj Mahal Hills in 1778.

New excise regulations: The imposition of a ban on tribals producing their own liquor, a significant aspect of their culture, fueled discontent.

Large-scale transfer of forest land: Transfers of land from Kol headmen to outsiders (Diku) and money-lenders, who often imposed oppressive measures and heavy taxes.

Restrictions on shifting cultivation: Instances such as the Khasi and Garo rebellions emerged due to the occupation of hilly land and the ban on shifting cultivation..

Exploitation by traders and money lenders: The Santhal rebellion targeted moneylenders and traders, while the Ulgulan uprising was directed against moneylenders.

Influence of Christian Missionaries and resistance against the interference of other religions like Hinduism, Islam, and Christianity, exemplified by the Tana Bhagat Movement.

Weaknesses of these tribal movements :

- The tribal uprisings were widespread in scope yet isolated and localized.
- They were the outcome of the issues and complaints that existed locally.
- The rebellion lacked strong leadership since its members had semi-feudal characteristics, a conventional mindset, and no viable alternative to the status quo in society.

Significance in raising the moral quotient of the national movement:

- The uprisings fostered a collective resistance against the oppressive nature of British rule.
- They played a crucial role in uniting tribal communities and instilling a sense of belonging to one nation.
- Tribal rebellions highlighted social, cultural, and political reasons, particularly the encroachment upon their land and their fight for rights over forest resources.

Conclusion:

The colonial rule, including the era of the East India Company, witnessed numerous Tribal uprisings and disturbances. These diverse grievances culminated in the revolt of 1857, which, despite initially targeting specific groups of Indians, stands out as a prominent uprising against British rule prior to the onset of the Indian Freedom movement.

9. Analyze the factors that contributed to the emergence of revolutionary nationalism in India and assess its significance in shaping the course of the national movement. Discuss the bravery and patriotism demonstrated by revolutionary nationalists and the impact of their actions on the broader struggle for independence.

Introduction:

The rise of revolutionary ideology in India during the late 19th and early 20th century was influenced by various internal and external factors, particularly affecting the youth. The initial phase of the revolutionary movement was concentrated in Bengal, Maharashtra, Punjab, U.P., Orissa, Bihar, and Madras provinces, with Bengal, Maharashtra, and Punjab being the most politically active regions.

Body:

Factors contributing to revolutionary nationalism:

Nationalism among youth: A most vital factor which contributed to amplifying the spirit of nationalism among the countrymen was the 'economic exploitation' of Indians by the British Government and the Partition of Bengal. Various nationalist leaders, such as Jathindranath Banerjee, Virendra Ghosh, and Barindrakumar Ghosh, expressed this sentiment through publications like 'Yugantar.'

Failure of Moderate and extremist congress: Younger element was not ready to retreat after the decline of the national militancy phase. The fallout of the Swadeshi and Boycott Movement was the immediate reason.

Leadership's failure to tap the revolutionary energies of the youth.

Government repression left no peaceful avenues open for the protest.

Inspired by the individual heroic action along the lines of Irish nationalists or Russian nihilists.

Ideological appeal of ideas: Freedom through revolution, heroic action, supreme sacrifice, Assassinate unpopular British officials, striking terror in the hearts of rulers, and arouse people to expel the British with force attracted the new nationalists

Impact of Revolutionaries on Indian Nationalism:

- The revolutionaries played a crucial role in promoting the national cause and spreading the message of nationalism within the country and abroad.
- The era of revolutionary terrorism led to the emergence of secret societies throughout the country, with organizations like the Anushilan Samiti becoming prominent.
- The influence of revolutionaries also shaped the Congress' strategy, leading to the involvement of youth in rural reconstruction programs.
- Several revolutionaries, including Ras Behari Bose, Chander Shekhar Azad, Lala Hardyal M.A., Madan Lal Dhingra, and S. Ajit Singh, expanded the Indian independence movement beyond national boundaries.
- It could not mobilize the masses. In fact, it had no base among the people. They believed in individual heroism.
- This movement failed to achieve its objective of independence. As a result, many revolutionaries, who

were imprisoned, underwent a process of rethinking, and a significant number of them eventually embraced Marxism.

Conclusion:

Although the revolutionary movement in India ultimately did not achieve its goal of independence through armed revolt, it made a significant contribution to the growth of nationalism. Figures like Bhagat Singh, Chandrashekhar Azad, Surya Sen, and Rajguru became household names, inspiring and arousing the spirit of nationalism among the Indian people. Despite not accomplishing their intended objectives, the revolutionaries managed to challenge the authority and instill fear in the hearts of the rulers, leaving a lasting impact on Indian history.

10. Examine the efficaciousness of the League of Nations in upholding global tranquillity in the aftermath of the Great War, providing a critical analysis of its overarching role in the international arena.

Answer:

Introduction:

The League of Nations was established during the Paris Peace Conference after World War I with the primary objective of promoting international peace and security. It aimed to settle disputes through collective security principles and foster global cooperation for socio-economic development. While it achieved some successes, its overall effectiveness has been subject to critical analysis.

Body:

1. Dispute Resolution:

- a. The League successfully resolved territorial disputes, such as the Greece-Bulgaria conflict, by persuading Greece to pay compensation to Bulgaria.
- b. It also played a role in settling the territorial dispute between Peru and Colombia.
- c. In the Upper Silesia dispute between Germany and Poland, the League facilitated a settlement and partitioned the region between the two parties.

2. Combating Opium Trade and Refugee Plight:

- a. The League actively worked to combat the international trade in opium and sexual slavery.
- b. It alleviated the plight of refugees, particularly in Turkey, by introducing the Nansen passport, the first internationally recognized identity card for stateless refugees.

3. Mandate Governance and Plebiscites:

- a. The League's Permanent Mandates Commission effectively monitored the governance of League of Nations mandates.
- b. It organized plebiscites in disputed territories like the SAAR region of Germany, allowing residents to determine their country of choice.

4. Promotion of Human Welfare:

- a. The League's Health organization played a crucial role in identifying the causes of various epidemics.
- b. It successfully combated the Typhus epidemic in Russia, preventing its spread to other parts of Europe.

5. Disarmament Efforts:

- a. Active promotion of disarmament and arms control to prevent future conflicts.
- b. Organization of conferences and negotiations to limit the arms race and reduce military expenditure.
- c. The Geneva Protocol of 1924, prohibiting the use of chemical and biological weapons.

6. Economic Cooperation:

- a. Encouragement of economic cooperation among member nations.
- b. Facilitation of negotiations on trade agreements and tariff reductions.
- c. Provision of economic aid to promote stability and prosperity.
- d. Assistance with economic reconstruction in countries like Austria and Hungary after World War I.

7. Influence on International Law:

- a. Contributions to the development of international law.
- b. Codification and establishment of legal frameworks in areas such as maritime law, refugee protection, and treatment of prisoners of war.

8. Formation of the International Labour Organization (ILO):

- a. The League of Nations played a crucial role in establishing the ILO in 1919.

- b. The ILO aimed to improve working conditions, promote workers' rights, and foster social justice globally.
- c. The League's efforts led to the adoption of international labour standards and the promotion of fair labour practices.
- d. The ILO became a specialized agency of the United Nations in 1946 and continues its work to this day.

Limitations of the League of Nations:

1. The League lacked participation from major powers such as the United States, which never joined, and the Soviet Union, which joined only briefly. This absence weakened the League's authority and its ability to enforce decisions, limiting its effectiveness in addressing global issues.
2. The League had limited success in preserving international peace as it failed to intervene in significant conflicts leading up to World War II, such as the Italian invasion of Abyssinia, the Spanish Civil War, and the Second Sino-Japanese War.
3. It was largely powerless and silent in the face of major events that violated the Treaty of Versailles, including Hitler's remilitarization of the Rhineland, occupation of the Sudetenland, and Anschluss with Austria.
4. General weaknesses within the organization, such as complex voting structures and incomplete representation among world nations, hindered the ratification of resolutions and decisive action.
5. The League's effectiveness was further limited by the refusal of the United States to join, which deprived it of the influence and resources of a major global power.
6. Member states often prioritized their own national interests over collective action and the League's objectives. This resulted in reluctance to enforce sanctions or take strong measures against aggressor nations, diminishing the League's influence in resolving conflicts.
7. The League operated during a period of economic downturn and the Great Depression. This financial strain limited its ability to provide economic aid and support to member states, impacting its capacity to address global economic challenges effectively.

Conclusion:

In conclusion, the League of Nations played a significant role in resolving disputes, combating illicit activities, monitoring mandates, and promoting human welfare. However, its limitations, including failures in preventing conflicts, inadequate responses to major events, structural weaknesses, and the absence of U.S. participation, compromised its overall effectiveness in upholding global tranquillity. Although the League made contributions to the development of international law and de-escalated tensions, it was ultimately unable to prevent member nations from starting World War II.

11. India's rich heritage is deeply rooted in a strong tradition of theatre and storytelling. However, the advent of digital entertainment has presented a significant challenge to the survival of theatre, creating an existential crisis.

Answer:

Introduction:

The art of theatre is a combination of music, dance, drama, stylized speech, and spectacle. It holds a deep connection to the local identity and native culture of India. The country boasts numerous traditional arts, performing arts, and crafts that have survived for centuries. These artistic forms not only entertained people in the past when entertainment options were limited but also served as a medium for transmitting knowledge through religious scriptures, myths, and folk tales, often carrying moral messages.

Body:

Evolution of Indian Theatre:

- The Natyashastra, an ancient treatise on performing arts, provides insights into different types of plays, categorizing them as major (Rupaka) or minor (uparupaka).
- Folk Theatre in India encompasses a wide range of art forms, incorporating music, dance, pantomime, verse recitation, epic storytelling, graphic arts, religion, and festive elements.
- Indian folk theatre can be broadly divided into religious and secular categories, resulting in Ritual Theatre and Theatre of Entertainment, respectively. These forms influenced and complemented each other, with folk and traditional styles often relying on narrative or vocal elements like singing and

recitation.

- While each theatrical style has its distinct characteristics based on local customs, there are similarities in execution, staging, costume, makeup, and acting styles across different forms.
- Southern Indian forms, such as Kathakali and Krishnattam in Kerala, emphasize dance, qualifying as dance dramas. In contrast, North Indian forms focus on songs, like Khyal in Rajasthan, Maach in Madhya Pradesh, Nautanki in Uttar Pradesh, and Swang in Punjab. Other forms, like Jaatra in Bengal, Tamasha in Maharashtra, and Bhavai in Gujarat, emphasize dialogue, comedy, and satire.
- Puppet theatre also thrived in India, with various forms like Shadow (Gombeyatta in Karnataka, Ravana Chhaya in Odisha), Glove (Gopalila in Odisha, Pavai Koothu in Tamil Nadu), Doll (Bommalattam in Tamil Nadu and Mysore, Putul Naach in Bengal), and String puppets (Kathputli in Rajasthan, Sakhi Kundhei in Odisha).
- Dramatic elements can be found in classical Indian dance forms like Bharat Natyam, Kathak, Odissi, and Mohiniattam, as well as in folk dances like Gambhira and Purulia Chhau in Bengal, Seraikella Chhau in Bihar, and Mayurbhanj Chhau in Odisha. Some ritual ceremonies, particularly in Kerala, incorporate dramatic content, as seen in Mudi yettu and Theyyam.

Significance of theatre as an art form:

- Theatre serves as a platform for the continuation of traditions, customs, and improvisation, intertwining age-old forms and desires to innovate.
- It holds up a mirror to society, highlighting its flaws and virtues. For example, during the Indian national movement, the theatre played a significant role in spreading national consciousness.
- Theatre provides a livelihood for actors and other professionals involved in the industry.
- Renowned Indian artists, like Naseeruddin Shah, Irrfan Khan, Dr. Rajkumar, and Shabana Azmi, honed their skills in the theatre.

Facing an existential crisis:

- The rise of digital media and OTT platforms like Amazon prime, Netflix etc has made various forms of entertainment, including movies, series, and reality shows, easily accessible through smartphones and televisions.
- The interest in traditional theatre is diminishing, even in rural India, due to widespread smartphone and Television usage.
- The pandemic has caused significant losses in theatre productions, making revival challenging.
- Audiences are becoming more inclined towards fast content consumption and prefer not to physically attend performances.

Conclusion:

To preserve our rich cultural heritage, Indian theatre must adapt to technology and integrate with it. The professional theatre industry is evolving rapidly, offering opportunities to work with cutting-edge software and hardware to create immersive experiences. Embracing technology can help revitalize Indian theatre and keep it relevant in the modern era while retaining its deep-rooted cultural significance.

12. The development of science and technology in ancient India can offer wisdom and key insights to present-day scientific advancements. Examine.

Answer:

Introduction:

India has a rich heritage of science and technology. The dependence on nature could be overcome by developments in science. In ancient India, religion and science worked in close proximity. India belongs to one of the oldest civilized cultures with a long tradition in science and technology. Her history of science can be studied in a different context compared to that of other modern civilizations.

Body:

1. Mathematics:

- The town planning of Harappa shows that the people possessed a good knowledge of measurement and geometry.
- By the third century AD, mathematics developed as a separate stream of study. Indian mathematics is supposed to have originated from the Sulvasutras.
- Brahmagupta's Brahmasputa Siddhanta is the very first book that mentioned 'zero' as a number, hence, Brahmagupta is considered as the man who found zero. He gave rules of using zero with

other numbers.

- Aryabhatta discovered algebra and also formulated the area of a triangle, which led to the origin of Trigonometry.

2. Astronomy:

- Jyotishvedanga texts established systematic categories in astronomy, but the more basic problem was handled by Aryabhatta (499 AD). His Aryabhattiya is a concise text containing 121 verses. It contains separate sections on astronomical definitions, methods of determining the true position of the planets, description of the movement of the sun and the moon, and the calculation of the eclipses.

3. Metallurgy:

- The Vedic people were aware of fermenting grain and fruits, tanning leather, and the process of dyeing.
- By the first century AD, mass production of metals like iron, copper, silver, gold, and of alloys like brass and bronze were taking place. The iron pillar in the Qutub Minar complex is indicative of the high quality of alloying that was being done.

4. Medicine:

- From 600 BC began the period of rational sciences. Takshila and Varanasi emerged as centers of medicine and learning.
- The two important texts in this field are Charak Samhita by Charak and Sushrut Samhita by Sushruta.

The development of science and technology in ancient India can offer wisdom and key insights to present-day scientific advancements:

1. Ayurveda:

- The plants and herbs mentioned in Charaka Samhita are relevant even today and form the foundation of Ayurveda.
- In the last few decades, there has been growing interest in alternative forms of therapy globally.
- There are attempts by biomedical and Ayurvedic researchers to correlate Ayurvedic understanding of the nature of disease with modern biomedical concepts.

2. Yoga:

- Many western nations have adopted Yoga for mental and physical well-being. More research is being done in this regard.
- Yoga has been found to lessen symptoms of depression and anxiety, ease chronic back pain, lower stress levels, boost brain function, and improve heart health.

3. Decimal system:

- What we use as the modern decimal system was compiled in its entirety in India. Although other cultures had introduced some features of the numeric system beforehand, it was completed in India by the 9th century AD.
- All the calculations that we do today in the metric system are possible only because of discovery of "0" and the decimal system.

4. Chandrasekhar Limit:

- Indian Nobel Prize-winning physicist Subrahmanyan Chandrasekhar discovered the calculation used to determine the future of what would happen to a dying star.
- If the star's mass is less than the Chandrasekhar Limit, it will shrink to become a white dwarf, and if it is great, the star will explode, becoming a supernova.
- It is said that he was influenced by ancient astronomical texts, like Munkadopnishad which mentions Vishwaruchi, which absorbs everything in the Universe, i.e., Black hole.

5. Physics and nuclear energy:

- The concept of the atom can be traced to Acharya Kanad. Kanad founded the Vaisheshika school of philosophy where he taught his ideas about the atom and the nature of the universe.
- Today, India is one of the few countries that possess nuclear technology.

Conclusion:

As illustrated above, modern sciences that exist today in India and elsewhere have roots in the ancient scientific past of India. Many advancements in fields of science and technology can be traced to the basic foundational knowledge that exists in India. In medieval times, this knowledge was disseminated

through the translation of ancient Indian books by Arabs and Persians. Such developments are believed to have taken India's wisdom to Europe and other western nations.

13. Explain the artistic and cultural legacy of the Harappan civilization, emphasizing its advanced societal features, geometric precision, sophistication, meticulous attention to detail, and abstract design motifs.

Answer:

Introduction:

During the third millennium BCE, a thriving civilization emerged along the banks of the Indus River, spanning Western India. Noteworthy aspects of this civilization were its imaginative creativity and artistic sensibilities. The major cities of Harappa and Mohenjo-Daro exemplified the remarkable achievements of this civilization.

Body:

Features of the Indus Valley Civilization:

Town Planning and Architecture:

- **Layout:** The cities were meticulously laid out in a rectangular grid pattern, with roads intersecting at right angles, running in a North-South and East-West direction.
- **Construction:** Burnt bricks of standardized dimensions were used for construction, and the large roads divided the cities into blocks, with smaller lanes connecting the houses to the main roads.
- **Types of Buildings:** The remains of dwelling houses, public buildings, and public baths have been discovered.
- **Planning:** The cities were divided into two parts, with an elevated citadel in the western section housing large structures such as granaries, administrative buildings, and courtyards. The elite class resided in the citadel.
- **Granaries:** Granaries had strategic air ducts and raised platforms for storage, protecting the grain from pests. Examples include the great granary in Mohenjo-Daro and two rows of six granaries in Harappa.

Public Baths: The presence of public baths indicates the significance given to ritualistic cleansing in the Indus Valley culture. The Great Bath of Mohenjo-Daro, in particular, stands out for its remarkable engineering, devoid of cracks or leaks.

Drainage System: The sophisticated drainage system is a distinctive feature, with small drains from houses connecting to larger drains alongside the main roads. The drains were loosely covered for periodic maintenance, and cesspits were placed at regular intervals.

Use of Seals: Seals were primarily used for commercial purposes, and they came in various shapes, including square, rectangular, circular, and triangular. Some seals were also used as amulets, and pictographic scripts found on seals suggest their potential educational use. Examples include the Unicorn seal and the Pashupati seal made of Steatite.

Bronze Casting: Bronze casting was widespread, employing the lost wax technique or Cire Perdue. Notable bronze artifacts include the Bronze Dancing Girl of Mohenjo-Daro and the bronze Bull of Kalibangan.

Pottery: Plain and painted pottery, including Red and Black pottery, was used for storage, decoration, and straining liquor through perforations.

Jewellery and Clothing: Both men and women adorned themselves with ornaments such as necklaces, fillets, armlets, and finger rings. Women also wore girdles and anklets. Beads made from various materials like amethyst, quartz, and steatite were popular. Cotton and wool were used for fabric, and spindles and whorls were crafted from expensive faience or cheaper clay.

Dockyard:

- Lothal, known as the "Manchester of Indus Valley," had a well-preserved dockyard.
- The site contained ship remains and instruments for measuring angles.
- The dockyard at Lothal is considered the world's earliest known dock, connecting the city to an ancient course of the Sabarmati River.
- Excavations conducted by the National Institute of Oceanography in Goa revealed marine microfossils and salt crystals, indicating that the structure was indeed a dockyard.

Conclusion:

The Indus Valley Civilization, contemporaneous with Mesopotamian civilization, was the largest among the four ancient civilizations. Its features, such as the meticulously planned network of roads, houses, drainage systems, and remarkable engineering skills, highlight the advanced knowledge and creativity that existed during that era and even continue today in modified form.

14. To what extent does India's present-day situation reflect the enduring influence of its colonial past, considering the extensive and profound impact that colonialism has had on various aspects of life in the regions that were colonized worldwide?

Answer:

Introduction:

- Colonialism, defined as the system or policy of a nation seeking to extend or retain its authority over other people or territories, involves the domination of people's lives and cultures for the purpose of economic extraction.
- Its main objective is to derive economic benefits from the colony.

Body:

India and Colonialism:

- The process of direct Indo-European commerce began with *Vasco da Gama's discovery of a new sea route to India in 1498*. The Portuguese quickly established trading posts in Goa, Daman, Diu, and Mumbai.
- The Dutch, English, and French followed suit. Due to internal conflicts among Indian kingdoms, the technological superiority of Europeans, and the economic benefits of commerce, European traders gradually gained political and military influence and appropriated lands.
- Although various European powers controlled the regions in southern and eastern India, they eventually lost their territories to the British, with the exception of a few outposts such as Pondicherry, the Dutch port in Travancore, and the Portuguese colonies of Goa, Daman, and Diu.

Social and Economic Impact of Colonialism:

- Deindustrialization of markets resulted from the skewed industrial revolution of first world countries, leading to rising unemployment in various sectors of the economies of different nations.
- *Mercantilism was both the cause and effect of colonialism*, as mercantile economic policies served as an impetus for colonization and colonial exploitation further reinforced the ideology of mercantile capitalism, leading to increased trade volume for colonizers and proportional suffering for colonies.
- The economic impact of colonialism included the *drain of wealth through control over production and trade, exploitation of natural resources, and infrastructure improvement*.
- Political deprivation entailed the *absence of political rights for Indians*, with laws and regulations made solely for the welfare of the British. Indians had minimal involvement in administration, and decisions regarding the welfare of Indians were made by administrators in Britain.
- To meet labor requirements, colonizers resorted to enslaving native populations initially. However, with the decline in the native population, slaves were imported from Africa as a lucrative alternative.
- *Social inequality* prevailed as Indians were treated as *inferior compared to the British*, with their interests and traditions disregarded. Indians were forced to conform to the British social order without receiving due respect. Equality between Indians and British was non-existent.
- The **Columbian Exchange** refers to the *widespread exchange of plants, animals, culture, human populations, technology, and ideas between the Americas and Eurasia during the 15th and 16th centuries, as a result of European colonization and trade*.
- Colonial competition in African continent caused unreasonable and unnatural division of Country's boundary by ignoring the ground realities of ethnic, linguistic and climatic conditions, just to make maximum profits. This colonial intention based on exploitation of natural and human resources resulted in persistent tension among and within African countries in form of ethnic clashes, boundary disputes between countries, religious tensions and many others. Civil war in Ethiopia, sustained suffering in South Sudan, Conflicts in Central African Republic etc. might be attributed the outcomes of colonial rules in African Subcontinent.
- Forced migration either in form of slaves from African Continent or in form of 'Girmitiya labours' (world 'girimitiya' is a prolapse of 'Agreement') from Indian Subcontinent (especially from North India),

resulted in huge miseries to these migrants in form of exploitation. Many Civil Wars, Ethnic Tension in South-East Asian Countries, Middle American Countries, Latin American Countries and Pacific Island Nations might be attributed to Force Migration from different colonies worldwide.

Impact of India's Colonial Past in the Present Day:

- Colonialism remains a relevant factor in understanding the problems and dangers of today's world. *Many of our problems can be directly attributed to the impact of imperialism and the policies of colonial rulers.*
- The colonial administrative habit of “*divide and rule*,” exemplified by British policy in the subcontinent after 1857, systematically promoted *political divisions between Hindus and Muslims, leading to the tragic Partition.*
- Boundaries drawn during colonial times, even if unchanged after independence, continue to create significant problems of *national unity, such as the Indo-Pak and Indo-China borders.*
- *Uneven development of infrastructure* in a poor country, prioritizing the benefits of the colonialists, can lead to unequal distribution of resources, further *dividing society between neglected and better-served regions* in terms of roads, railways, power stations, telecommunications, bridges, and canals.
- The advancing underdevelopment in many Southern countries, struggling to remain players in global capitalism, has *resulted in desperate poverty, ecological collapse, and rootless, unemployed populations beyond the control of weakening state systems.*
- Britishers exploitative policies in tribal and remote areas and lack of development in these areas leads to major problems like *Left wing extremism in the country, ethnic conflicts in North - East region such as recent ongoing Violence in Manipur and many others.*

Conclusion:

- Colonialism have had a devastating impact over world and India. Many of today's problem are directly and indirectly associated with colonial outcomes.
- India's colonial past has had a profound impact on its present-day political, economic, and social systems. While India has made significant progress in the decades since independence, it still faces many challenges in overcoming the legacy of colonialism.
- Contemporary world should always aware of new form of colonialism and imperialism which is called as neo-colonialism and neo-imperialism which used the ‘capital’ and other economic instruments as its tool.

15. Do you believe that the moderate phase of the national movement, characterized by Congress making demands through petitions and operating within the boundaries of the law during its initial two decades, should be regarded as a failure? Critically analyse.

Answer:

Introduction:

The moderates played a significant role in the struggle for Indian independence. Their primary aim was to achieve self-governance within the British Empire, following a moderate approach rather than an extreme one against British rule.

Body:

Characteristics of the Moderate Phase:

- The political demands of the moderates were relatively moderate:
- Between 1885 and 1892, their main focus was on expanding and reforming the Legislative Councils, advocating for elected representatives of the people and increasing powers for these Councils.
- They advocated for conducting the Indian Civil Service (ICS) exam in India, allowing more Indians to participate in the administration.
- They emphasized the separation of the judiciary from the executive.
- They sought freedom of speech, expression, and the formation of associations.
- They called for the repeal of the Arms Act of 1878.
- They pushed for increased spending on Indian education.

However, the economic demands of the moderates were more radical:

- Notably, the moderates engaged in systematic and fact-based criticism of British economic policies through the press and publications.

- The drain theory, popularized by Dadabhai Naoroji, became a focal point of nationalist critique, arguing that Britain was exploiting India economically.
- Other nationalist leaders like R.C. Dutt, echoed Naoroji's ideas in their works.
- The moderates demanded Indian control over public finances, echoing the slogan "No taxation without representation" from the American War of Independence.
- They advocated for a reduction in military expenditure, with increased allocation for health and education.
- They called for a decrease in land revenue, abolition of the salt tax, and supported income tax and import duties on products consumed by the wealthy and middle classes.
- Foreign capital was seen by Naoroji and others as exploiting and despoiling Indian resources.
- They sought the development and protection of Indian industries through increased tariffs on imports and government support.
- The idea of Swadeshi, promoting Indian industries by using Indian goods and boycotting British goods, gained popularity.

The limitations of the Moderate Phase were as follows:

- Many moderates viewed British rule as a providential means of modernization.
- They lacked organization and agitation against British rule due to their intrinsic faith in English democratic liberal political tradition.
- Their goals and methods were limited, seeking reforms within British rule rather than complete expulsion.
- They associated liberty with class privilege and favoured gradual or piecemeal reforms.
- Early Congress members had faith in peaceful and constitutional agitation rather than more popular means.
- The movement primarily involved the educated classes and did not engage the masses effectively, lacking faith in their involvement.
- Their immediate demands were focused on democratic rights for educated Indians, rather than encompassing the entire population.

However, the Moderate Phase did have some successes:

- Moderates such as Naoroji, Dutt, and Wacha analysed the political economy of British rule and presented the "drain theory" to explain the British exploitation of India.
- They generated an all-India public opinion highlighting British rule as the major cause of India's poverty and economic backwardness. Their demands included reducing land revenue, abolishing the salt tax, and improving working conditions for plantation labour.
- They contributed to the expansion and reform of councils, allowing greater Indian participation and control over finances.
- They worked towards the long-term objective of democratic self-government.
- They campaigned for general administrative reforms, Indianisation of government services, and the separation of judicial and executive functions.
- They criticized oppressive bureaucracy, an expensive judicial system, aggressive foreign policies, and advocated for increased welfare, education, and agricultural improvements.
- They fought for civil rights, including freedom of speech, thought, association, and a free press, spreading democratic ideas and incorporating civil rights into the freedom struggle.

Conclusion:

The moderates played a crucial role in building a national movement and fostering anti-imperialist sentiments. However, their failure to include the masses, particularly women, and demand universal suffrage limited the movement's democratic base. Despite these limitations, the moderate phase achieved significant accomplishments in terms of political awareness, reform of councils, economic critique, and the defence of civil rights.

MCQs Based on Current Affairs

1. Consider the following statements:

1. India is the world's largest consumer and second-largest producer of sugar.
2. The International Sugar Organization (ISO) is the only worldwide forum for the exchange of views by major sugar producing, consuming and trading countries at an intergovernmental level.
3. Brazil is set to chair the International Sugar Organisation in 2024.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

2. Consider the following statements:

1. The island of Great Nicobar is the southernmost tip of India.
2. The Great Nicobar is home to Jarawas tribes.
3. The giant leatherback turtle and Nicobar megapode are listed in Schedule I of the Wildlife (Protection Act), 1972.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

3. Consider the following statements with respect to the Speaker of the Lok Sabha:

1. The term 'pro tem speaker' is mentioned in the Constitution of India.
2. The Speaker certifies a Bill to be a Money Bill.
3. The election of the Speaker is held on a date fixed by the Prime Minister of India.
4. The Tenth Schedule allows Speaker to resign from their political party on being elected to their office.

How many of the above statements given is/are correct?

- A. Only two
- B. Only three
- C. All four
- D. None

4. Consider the following statements with respect to NOTA:

1. During 18th Lok Sabha General Election, Indore seat got highest number of NOTA votes in the history of Lok Sabha polls in the country.
2. NOTA was first introduced in India in 2014.
3. NOTA votes are counted but don't affect the election outcome.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

5. Consider the following statements with respect to 'living will':

1. Justice Mahesh Sonak, a High Court judge, became the first person in Goa to register a living will.
2. A living will, also known as an advanced medical directive, is a legal document that outlines a person's end-of-life medical treatment preferences.
3. It is used in situations where patients are unable to make decisions for themselves.
4. The Supreme Court of India legalized passive euthanasia in 2017, contingent upon the individual having a living will.

Which of the above statements are correct?

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

6. Consider the following statements:

1. The Madras High Court has ruled that cooperative societies are not required to comply with the Right to Information (RTI) Act of 2005.
2. The court judgment stated that a cooperative society registered under the Tamil Nadu Co-operative Societies Act does not fall within the RTI Act's definition of a public authority.
3. This ruling is in line with previous Supreme Court and High Court judgments, which have consistently held that cooperative societies are not subject to the RTI Act.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

7. Consider the following statements:

1. Atal Innovation Mission (AIM) has collaborated with the Innovation Centre Denmark (ICDK) to launch the fourth edition of the open innovation water challenge (AIM – ICDK Water Challenge 4.0).
2. The challenge aims to find innovative solutions to critical water-related challenges.
3. The challenge is a part of the Indo-Danish bilateral green strategic partnership.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

8. Consider the following statements:

1. The Cabinet Committee on Security (CCS) is headed by the Prime Minister.
2. The Cabinet Committees report directly to the Parliament.
3. The Cabinet Committees are constituted by the President of India.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

9. Consider the following statements:

1. Chief of Defence Staff General Anil Chauhan released the joint doctrine for cyberspace operations on June 15, 2024.
2. The doctrine will guide commanders in conducting cyberspace operations and war efforts in the complex military operating environment of modern warfare .
3. The release of the doctrine was intended to help streamline operations among the three services of the Indian military.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

10. Consider the following statements with respect to Post Office Act of 2023:

1. The Post Office Act of 2023 came into effect on June 18, 2024, repealing the 125-year-old Indian Post Office Act of 1898.
2. The Act now allows the Centre to intercept, open or detain any item and deliver it to customs authorities.
3. The Act does not contains provisions for matters related to state security, public order, emergency, public safety or contravention of other laws.
4. The Act also regulates private courier services for the first time.
5. Section 12 of the Act exempts the Post Office and its officers from any liability for loss, mis-delivery, delay or damage during service.

Which of the above statements are correct?

- A. 1 and 3 only
- B. 1, 2 and 4 only
- C. 1, 2 and 5 only
- D. 1, 2, 3, 4 and 5

11. Consider the following statements:

1. India recorded a trade deficit with nine of its top 10 trading partners in 2023-24.
2. The trade deficit increased in the last fiscal year compared to 2022-23 with China, Russia, Korea, and Hong Kong.
3. The trade deficit narrowed with the UAE, Saudi Arabia, Russia, Indonesia, and Iraq.
4. China is India's largest trading partner, with two-way commerce valued at \$118.4 billion.

Which of the above statements are correct?

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

12. Consider the following statements with respect to Cost Inflation Index (CII):

1. The Central Board of Direct Taxes (CBDT) has notified the Cost Inflation Index (CII) as 363 for

the current financial year 2024-25.

- The CII is used to calculate the long-term capital gains on the sale of assets and is essential for taxpayers when adjusting for inflation.
- The CII for the previous fiscal year was 348, and for 2022-23, it was 331.
- The increase in CII reflects the inflation in the economy, which causes the prices of goods and services to increase over time.

Which of the above statements is/are correct?

- 1 and 3 only
- 2 and 4 only
- 1, 2 and 3 only
- 1, 2, 3 and 4

13. Consider the following statements with respect to the SROs:

- The Reserve Bank of India (RBI) has established a framework for self-regulatory organizations (SROs) in the fintech sector.
- SROs should function as independent bodies, free from external influence.
- SROs should establish and enforce regulatory standards, resolve disputes, and promote ethical conduct and transparency.
- SROs should have diversified shareholding, with no entity holding more than 20% of its paid-up share capital.

Which of the above statements is/are correct?

- 1 and 3 only
- 2 and 4 only
- 1, 2 and 3 only
- 1, 2, 3 and 4

14. Consider the following statements with respect to the millet:

- India accounts for 80% of millet production in Asia and 20% globally.
- Productivity of millets in India is lower than that of other major producers, such as China, Ethiopia and Russia.
- Millets are typically grown under rain-fed conditions, but assured irrigation could improve yield.

How many of the above statements given is/are correct?

- Only one
- Only two
- All three

D. None

15. Consider the following statements with respect to the GAAR:

- The Telangana High Court has ruled against a taxpayer in the matter of the General Anti-avoidance Rule (GAAR), which is the first judgment on GAAR, seven years after it came into effect on April 1, 2017.
- GAAR empowers tax authorities to deny tax benefits on transactions or arrangements that have no commercial substance and whose only purpose is to avoid tax.

Which of the statements given above are correct?

- Only 1
- Only 2
- All of the above
- None of the above

16. Consider the following statements with respect to the World Investment Report 2024:

- The World Investment Report 2024 was released by UNCTAD (United Nations Conference on Trade and Development) on June 20, 2024.
- Global foreign direct investment (FDI) fell by 2% to \$1.3 trillion in 2023.
- New funding for Sustainable Development Goals sectors dropped over 10%, particularly in agrifood and water.
- India saw a 43% drop in FDI, from \$49 billion to \$28 billion.
- Multinational corporations became more careful in 2023, leading to an overall drop in FDI.

Which of the above statements is/are correct?

- 1 and 3 only
- 1, 2 and 4 only
- 1, 2 and 5 only
- 1, 2, 3, 4 and 5

17. Consider the following statements:

- Recently, India successfully concluded the hosting of 46th Antarctic Treaty Consultative Meeting (ATCM-46) and the 26th Committee on Environmental Protection (CEP-26).
- Parties adopted 17 revised and new management plans for Antarctic Specially Protected Areas (ASPA).
- Mystamp customized with the ATCM-46 logo was released in collaboration with India Post.

How many of the above statements given is/are correct?

- Only one
- Only two
- All three
- None

18. Consider the following statements:

- The Organization for Economic Co-operation and Development (OECD) reported that in 2022, developed countries contributed \$115.9 billion in climate finance to developing countries.
- This achievement comes two years after the original target year of 2020.
- The amount represents a significant increase of 20% from 2021.

How many of the above statements given is/are correct?

- Only one
- Only two
- All three
- None

19. Consider the following statements with respect to the forced displacement:

- The UNHCR has reported that worldwide levels of forced displacement have reached a new high, with a 50 percent increase in displacement over the past five years.
- Forced displacement rose to 120 million in May 2024, marking the 12th consecutive annual increase.
- Key contributing factors include the war between rival militaries in Sudan, brutal fighting in the Democratic Republic of the Congo and Myanmar and the conflict in Gaza.
- Syria holds the record for the sheer number of people forcibly displaced both in and outside its borders.

Which of the above statements is/are correct?

- 1 and 3 only
- 2 and 4 only
- 1, 2 and 3 only
- 1, 2, 3 and 4

20. Consider the following statements with respect to the INCOIS:

- INCOIS (Indian National Centre for Ocean Information Services) has developed a deep

learning-based Bayesian Convolutional Neural Network (BCNN) model to predict El Niño and La Niña conditions .

- This model provides probabilistic forecasts of El Niño evolution for a lead time of 15 months, exceeding the prediction capacity of widely used dynamical forecast systems.

Which of the statements given above are correct?

- Only 1
- Only 2
- All of the above
- None of the above

21. Consider the following statements:

- A recent study found that DDT levels in humans and the environment have declined since 2004, but levels of other persistent organic pollutants (POPs) with similar properties have risen.
- The Stockholm Convention on Persistent Organic Pollutants was ratified in 2004, which led to a decline in DDT levels in humans and the environment.

Which of the statements given above are correct?

- Only 1
- Only 2
- All of the above
- None of the above

22. Consider the following statements:

- Air pollution deaths totaled 8.1 million globally and 2.1 million in India.
- India and China, at 35%, account for the majority of global air pollution fatalities.
- India had the highest number of air pollution deaths in children under the age of five, at 169,400.

How many of the above statements given is/are correct?

- Only one
- Only two
- All three
- None

23. Consider the following statements :

- Recently, Zimbabwe's central bank introduced the ZiG to stabilize the economy and curb inflation.
- The ZiG replaced the Zimbabwean dollar, which lost 75% of its value in early 2024.

3. The central bank aims to prevent the currency from losing value by ensuring equivalent value in precious minerals or foreign exchange.
4. Zimbabwe has a history of monetary instability, with the ZiG being the sixth currency introduced in 15 years.
5. The government aims to increase confidence in the local currency and reduce the use of the US dollar.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 1, 2 and 4 only
- C. 1, 2 and 5 only
- D. 1, 2, 3, 4 and 5

24. Consider the following statements:

1. India and Qatar held the inaugural meeting of the Joint Task Force on Investment (JTFI) in New Delhi on June 6.
2. The two countries have agreed to set up a taskforce to promote investments between Qatar and India as well as a joint taskforce on energy.
3. Qatar is the largest supplier of LNG to India, accounting for over 48 per cent of India's global LNG imports.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

25. Consider the following statements with respect to the 50th G7 summit:

1. The 50th G7 summit was held in Fasano, Apulia, Italy, from June 13 to 15, 2024.
2. The summit was attended by the leaders of the G7 member states, the President of the European Council, and the President of the European Commission.
3. Pope Francis attended the G7 summit for the first time in history.
4. The G7 leaders agreed to provide \$50 billion in loans to Ukraine by the end of 2028.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

26. Consider the following statements with respect to SIPRI report on nuclear arsenals:

1. Russia and the United States possess almost 90% of the world's nuclear weapons.
2. The global inventory of nuclear warheads was 12,121 in January 2024, a decrease of 391 from the previous year.
3. India has expanded its nuclear arsenal, now possessing 172 nuclear warheads, surpassing Pakistan's 170 warheads.
4. China's nuclear arsenal has increased to 500 warheads, up from 410 in 2023.
5. All nine nuclear-armed states, including the United States, Russia, the United Kingdom, France, China, India, Pakistan, North Korea, and Israel, are modernizing their nuclear arsenals.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 1, 2 and 4 only
- C. 1, 2 and 5 only
- D. 1, 2, 3, 4 and 5

27. Consider the following statements:

1. India and Cambodia are in talks to collaborate on digital payments using the Unified Payment Interface (UPI) to boost trade and tourism.
2. The countries are also discussing an investment treaty and cooperation in the pharmaceutical sector.
3. Cambodia is a member of the Association of Southeast Asian Nations (ASEAN) and has a free trade agreement with India.
4. The bilateral trade between India and Cambodia has increased to \$403.78 million in 2023-24 from \$366.44 million in 2022-23.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

28. Consider the following statements with respect to the PREFIRE mission:

1. PREFIRE is India's first polar research vessel.
2. Launched in 2024, it aims to facilitate scientific research in the Arctic and Antarctic regions.
3. The vessel is operated by the National Centre for Polar and Ocean Research (NCPOR).
4. PREFIRE is equipped with state-of-the-art

laboratories and equipment for various scientific disciplines.

5. Research focus areas include climate change, oceanography, geology, and biology.

Which of the above statements is/are correct?

- A. 1 and 3 only
B. 1, 2 and 4 only
C. 1, 2 and 5 only
D. 2, 3, 4 and 5

29. Consider the following statements with respect to the New light-based tool to detect viral infection:

1. The tool utilizes a simple microscope to detect distortions in light as it passes through infected cells.
2. The tool uses light across the spectrum to inactivate virions.
3. This method can prevent the spread of enveloped viruses.
4. The method uses ionizing radiation (gamma ray, X-ray, neutron, and high energy ultraviolet) and non-ionizing photo-inactivation (lasers and blue light) to inactivate virions.
5. The method can inactivate viruses without the risk of drug resistance and other unwanted side effects.
6. This method can also be useful for inactivating other microorganisms.

How many of the above statements given is/are correct?

- A. Only three
B. Only four
C. Only five
D. All six

30. Consider the following statements with respect to the Nidoviruses:

1. Nidoviruses are RNA viruses that can cause pandemics and deadly diseases in vertebrates.
2. These viruses have common characteristics that distinguish them from other RNA viruses.
3. Nidoviruses can be found in various vertebrates, from fish to rodents, including coronaviruses.
4. These viruses can exchange genetic material between different species.

Which of the above statements is/are correct?

- A. 1 and 3 only
B. 2 and 4 only

- C. 1, 2 and 3 only
D. 1, 2, 3 and 4

31. Consider the following statements with respect to the 3D printed rocket:

1. Agnikul Cosmos' launch of the world's first rocket with a fully 3D-printed engine.
2. Agnikul Cosmos, a startup incubated at IIT Madras, launched the rocket on May 30, 2024 .
3. The rocket is capable of carrying up to 660 pounds of payload into a 435-mile orbit .

How many of the above statements given is/are correct?

- A. Only one
B. Only two
C. All three
D. None

32. Consider the following statements with respect to the WIPO new treaty:

1. The World Intellectual Property Organization (WIPO) has recently concluded a treaty regarding intellectual property rights and genetic resources.
2. The treaty makes it mandatory for patent applicants to disclose the origin of genetic resources if the invention is based on those materials or associated traditional knowledge.
3. This treaty aims to provide additional protection to genetic resources and traditional knowledge of countries like India.
4. The treaty will require countries to change their legal framework for the disclosure of patent applicants.
5. The treaty was adopted on May 24, 2024, and was negotiated by 192 countries and 86 observers.

Which of the above statements is/are correct?

- A. 1 and 3 only
B. 1, 2 and 4 only
C. 1, 2 and 5 only
D. 1, 2, 3, 4 and 5

33. Consider the following statements with respect to the IIT Bombay:

1. IIT Bombay has risen 31 places to rank 108th in the QS World University Rankings 2025.
2. This is the first time since it began participating in these rankings that IIT Bombay has been ranked within the top 150 institutions.
3. IIT Bombay displayed the greatest strength in terms

of employer reputation, holding a global rank of 63 under that category.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

34. Consider the following statements with respect to the Raja Parb:

1. For the first time, Raja Parb, an agricultural festival of Odisha, was celebrated at Rashtrapati Bhavan.

2. The festival is celebrated during the onset of monsoons.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. Both
- D. None

35. Consider the following statements with respect to the NIIMH:

1. The World Health Organization (WHO) designated the National Institute of Indian Medical Heritage (NIIMH) in Hyderabad as a collaborating center for traditional medicine research.

2. NIIMH is a unit under the Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of Ayush.

3. NIIMH is the first WHO Collaborating Centre for "Fundamental and Literary Research in Traditional Medicine."

4. The recognition is granted for a period of four years, starting from June 3, 2024.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

36. Consider the following statements with respect to the Indiconema genus:

1. The Indiconema genus was discovered in the Eastern.

2. This genus is a type of microscopic algae that

produces 25% of the world's oxygen supply.

3. This discovery showcases India's unique biodiversity, as India is home to approximately 6,500 diatom taxa.

4. Indiconema is believed to be related to Afrocybella, a genus endemic to East Africa.

Which of the above statements is/are correct?

- A. 1 and 3 only
- B. 2 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2, 3 and 4

37. Consider the following statements with respect to the bioluminescent mushrooms:

1. The rare species of bioluminescent mushrooms are called *Filoboletus manipularis*, or "electric mushrooms."

2. These mushrooms emit a bright, otherworldly green light in the darkness of night due to a chemical reaction in their cells.

3. The species was discovered in the forests of Kasaragod, Kerala, by the Kasaragod division of the Kerala Forest and Wildlife Department and the Mushrooms of India Community.

How many of the above statements given is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

ANSWER

- | | | | |
|---------|---------|---------|---------|
| 1. (B) | 11. (D) | 21. (C) | 31. (C) |
| 2. (B) | 12. (D) | 22. (B) | 32. (D) |
| 3. (A) | 13. (C) | 23. (B) | 33. (B) |
| 4. (B) | 14. (C) | 24. (C) | 34. (C) |
| 5. (C) | 15. (C) | 25. (C) | 35. (D) |
| 6. (C) | 16. (D) | 26. (D) | 36. (D) |
| 7. (C) | 17. (C) | 27. (D) | 37. (C) |
| 8. (A) | 18. (B) | 28. (D) | |
| 9. (B) | 19. (D) | 29. (D) | |
| 10. (B) | 20. (C) | 30. (D) | |

UPSC Prelims Mock Paper

1. Consider the following statements with respect to Atmospheric Ammonia:
1. Atmospheric ammonia (NH_3) is a major component of the nitrogen cycle and the most abundant alkaline gas in the atmosphere.
 2. It originates from both natural and anthropogenic sources.
 3. The industrial pollution is the largest source of anthropogenic ammonia emissions.
- How many of the statements given above are **incorrect**?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
2. Consider the following statements with respect to SWATI Portal :
1. It is a single online portal representing Indian Women and Girls in STEMM.
 2. It is developed and maintained by the National Institute of Plant Genome Research (NIPGR).
 3. It is India's first portal to address the challenges of Gender-gap.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
3. HAPS technology holds significant potential for India's national security due to its ability to:
- (a) Provide real-time imagery and data acquisition across vast border regions.
 - (b) Offer improved communication infrastructure in remote areas that are prone to insurgency.
 - (c) Conduct high-altitude reconnaissance missions beyond enemy detection range.
 - (d) All of the above
4. Consider the following statements with respect to Greening India's Wastelands with Agroforestry (GROW) Report:
1. The report provides state-wise and district-wise analysis to support government departments and industries for greening and restoration projects.
 2. It is an initiative of Ministry of Environment, Forest and Climate Change.
- Which of the above statements is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
5. Consider the following statements:
1. Floor test is an Indian innovation in the parliamentary procedure introduced in 1954.
 2. Under Article 163, Governor of a State can call for a floor test when the house is not in the session.
 3. A trust vote can be called upon by the speaker of the legislative assembly when the house is in session.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
6. Consider the following pairs:
- | Protected areas | States |
|--------------------------------|--------------|
| 1. Gupteswar Forest | - Jharkhand |
| 2. Thanthai Periyar Sanctuary | - Kerala |
| 3. Vedanthangal Bird Sanctuary | - Tamil Nadu |
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
7. Consider the following statements with respect to e-Jagriti:
1. It is a unified portal that provides simple, fast and cost-effective consumer disputes redressal software solution at all levels.
 2. It uses artificial intelligence (AI) and machine learning (ML) to foster efficiency and innovation in the dispute resolution landscape.
 3. It is developed, designed and maintained by National Informatics Centre (NIC).
- How many of the statements given above are correct?
- (a) Only one

- (b) Only two
(c) All three
(d) None

8. Consider the following:
1. Belt and Road Initiative
2. The Living Indus initiative
3. Great Green Wall Initiative
4. The Accion Andina social movement
Which of the above projects are part of the World Restoration Flagships?

- (a) 2 and 3 only
(b) 2 and 4 only
(c) 2, 3 and 4 only
(d) 1, 2, 3 and 4

9. Consider the following:
1. Wanderoo
2. Indian Elephants
3. Nilgiri Tahr
4. Greater One-Horned Rhinoceros
5. Asiatic Lions

Which of the above animals are found only in India?

- (a) 3, 4 and 5 only
(b) 1, 3 and 5 only
(c) 2, 3, 4 and 5 only
(d) 1, 3, 4 and 5 only

10. Consider the following pairs

Organisms	Symbiotic Relationship
------------------	-------------------------------

- | | |
|--------------------------------|----------------|
| 1. Barnacles & Swimming Crabs | - Parasitism |
| 2. Clownfish & Sea Anemones | - Commensalism |
| 3. Barnacles & Humpback Whales | - Mutualism |
| 4. Corals & Sponges | - Competition |

How many of the pairs given above is/are correctly matched?

- (a) Only one
(b) Only two
(c) Only three
(d) All four

11. Consider the following statements with reference to Gulf Stream:

- It is a warm ocean current that originates from the Gulf of Mexico.
- It acts as a vital conveyor belt and regulates the climate of the South Atlantic region.
- It is part of the Atlantic Meridional Overturning Circulation (AMOC).

How many of the statements given above are correct?

- (a) Only one
(b) Only two
(c) All three
(d) None

12. Consider the following pairs:

Martial Arts	Originating State
1. Krav Maga	- Assam
2. Kalaripayattu	- Kerala
3. Gatka	- Punjab
4. Khukuri Dance	- Nagaland

How many of the pairs given above is/are correctly matched?

- (a) Only one
(b) Only two
(c) Only three
(d) All four

13. Consider the following statements regarding Convention on the Conservation of Migratory Species:

- It is also known as the Bonn Convention, is an environmental treaty under the aegis of the United Nations Environment Programme.
- It is the only global and UN-based intergovernmental organisation established exclusively for the conservation and management of terrestrial, aquatic and avian migratory species throughout their range.
- The Fourteenth Meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (COP14) will be hosted by the Government of Brazil.

How many of the above statements is/are correct?

- (a) Only one
(b) Only two
(c) All three
(d) None

14. With reference to Electoral Bonds, consider the following statements:

- Electoral bonds are interest-free bearer bonds or money instruments that can be purchased by companies and individuals in India from authorised branches of the State Bank of India (SBI).
- These bonds are sold in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh,

and Rs 1 crore.

3. Electoral Bonds have a life of only 15 days during which it can be used for making donations to political parties.

How many of the above statements is/are correct?

- (a) Only one
(b) Only two
(c) All three
(d) None

15. Consider the following statements regarding Micellar water:

1. Micellar water products contain something called micelles – clusters of molecules that are very effective at removing oily substances.
2. It is a commonly used skin care product that helps remove impurities and makeup from your skin.

Which of the above statements is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

16. Consider the following statements regarding Cassini Spacecraft:

1. Cassini-Huygens was a joint NASA, European Space Agency (ESA), ISRO space mission to Saturn.
2. It was one of the largest interplanetary spacecraft launched in 2015.

Which of the above statements is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

17. Consider the following statements regarding European Free Trade Association:

1. It is an intergovernmental organisation established in 1960 by the Stockholm Convention.
2. It's objective is to promote free trade and economic integration between its members within Europe and globally.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

18. Consider the following passage:

It is the largest national park of Madhya Pradesh. It is located in the Mandla and Balaghat districts of Madhya Pradesh. It is nestled in the Maikal range of Satpuras, the heart of India that forms the central Indian highlands. The forest depicted in the famous novel by Rudyard Kipling, *The Jungle Book*, is thought by some to be based on jungles, including this reserve. It is also the first tiger reserve in India to officially introduce a mascot, "Bhoorsingh the Barasingha". The park has a significant population of Royal Bengal Tiger, leopard, sloth bear, and Indian wild dog.

The above passage is related to which of the following tiger reserve?

- (a) Panna Tiger Reserve
(b) Pench Tiger Reserve
(c) Bandhavgarh Tiger Reserve
(d) Kanha Tiger Reserve

19. Consider the following statements regarding Young Scientist Programme (YUVIKA):

1. YUVIKA, is a learning and awareness creating programme of the ISRO to impart basic knowledge on Space Technology, Space Science, and Space Applications to younger students with a preference to urban areas.
2. Students those who have finished class 10 and are currently studying in class 11 can apply for the programme.
3. Two students from each state/Union Territory will participate in this programme every year, covering CBSE, ICSE, and state-board syllabus.

How many of the above statements is/are correct?

- (a) Only one
(b) Only two
(c) All three
(d) None

20. With reference to Anti-Satellite Weapon, consider the following statements:

1. It is designed to debilitate or destroy satellites that are already in orbit and operational.
2. All of these attacks can be launched from the air, low orbit, or even ground installations.
3. 'Mission Shakti' is the India's first ever Anti-Satellite Missile test.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

21. Consider the following statements regarding India Stack:

1. It is a set of Application Programming Interface (APIs) that allows governments, businesses, startups and developers to utilise a unique digital Infrastructure.
2. As the name of this project bears the word India, the vision of India Stack is limited to India only.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

22. With reference to Munich Security Conference, consider the following statements:

1. It is the world's leading forum for debating international security policy.
2. It is organised by the European Union.
3. It's objective is to build trust and contribute to the peaceful resolution of conflicts by sustaining a continuous, curated, and informal dialogue within the international security community.

Which of the above statements are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

23. Consider the following statements regarding Central Asian Flyway:

1. It covers a large continental area of Eurasia between the Arctic and Indian Oceans and the associated island chains.
2. A flyway is a geographical region within which a single or group of migratory species completes its annual cycle — breeding, moulting, staging and non-breeding.
3. There are five flyways in the world.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three

(d) None

24. With reference to Rubber Board, consider the following statements:

1. It is a statutory organization constituted under the Rubber Act, 1947 which functions under the administrative control of the Ministry of Commerce and Industry.
2. It is headed by the Prime Minister.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

25. Consider the following statements regarding Quasar:

1. A quasar is an extremely active and luminous type of active galactic nucleus.
2. Quasars are thought to form in regions of the universe where the large-scale density of matter is much higher than average.
3. They are among the most luminous, powerful, and vibrant objects known in the universe.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

26. With reference to Rhodamine-B, consider the following statements:

1. It is a water-soluble chemical compound.
2. It is a chemical commonly used for dyeing in the textile, paper, leather, and paints industry as a coloring agent that helps in attaining the red and pink spectrum.
3. It becomes particularly hazardous when it is mixed with food products, leading to cancer and tumour over time.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

27. Consider the following statements, with reference to Raisina Dialogue:

1. It is an annual conference on geopolitics and geoeconomics, which aims to address

the most challenging issues faced by the world.

2. It is held annually since 2015 in New Delhi.
3. The theme of the 2024 edition is "Chaturanga: Conflict, Contest, Cooperate, Create".

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

28. Consider the following statements regarding Neanderthals:

Statement I:

Neanderthals are an extinct species of archaic humans that lived in North America until about 40,000 years ago.

Statement II:

Neanderthals co-existed with modern humans for long periods of time before eventually becoming extinct.

Which one of the following is correct in respect of above statements?

- (a) Both statement I and statement II are correct and statement II is the correct explanation of statement I.
- (b) Both statement I and statement II are correct and statement II is not the correct explanation of statement I.
- (c) Statement I is correct but statement II is not correct.
- (d) Statement I is incorrect but statement II is correct.

29. Consider the following statements regarding Green Anaconda:

1. It is the largest snake in the world, when both weight and length are considered.
2. They are native to North America and generally live in deciduous forests.
3. The green anaconda is a member of a family of snakes called constrictors, which are very venomous snakes.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

30. Consider the following statements, with

reference to Pigeonpea:

1. It is an important legume crop and protein-rich food which is primarily consumed as Pulse in India.
2. It is predominantly a crop of tropical areas mainly cultivated in semi arid regions of India.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

31. Consider the following statements regarding Fair and Remunerative Price:

1. It is the price declared by the government, which mills are legally bound to pay to farmers for the cane procured from them.
2. The FRP is fixed by the Commission for Agricultural Costs and Prices (CACP).

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

32. Consider the following statements, with reference to Cabinet Committee on Security (CCS):

1. Cabinet Committees are extra-constitutional.
2. CCS is headed by the Speaker.
3. The CCS deals with all the issues related to the defence and security of India.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

33. With reference to Positronium, consider the following statements:

1. Positronium is a short-lived hydrogen-like atom, which consists of an electron and its antimatter equivalent, a positron.
2. Due to its very short life, it annihilates with a half-life of 142 nano-seconds.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

- 34.** With reference to Spotted Deer, consider the following statements:
1. The spotted deer or chital is a deer species native to the Indian subcontinent.
 2. It is widely distributed in Asia, especially in India, Sri Lanka, Bangladesh, Bhutan, and a small group in Pakistan.
 3. It is listed as endangered in IUCN Red List.
- How many of the above statements is/are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
- 35.** Consider the following statements regarding Planets:
1. Planets are similar to other planets, but they orbit a black hole instead of a star or brown dwarf.
 2. They have enough mass to be rounded by their own gravity, but not enough to start thermonuclear fusion and become stars.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 36.** Consider the following statements regarding Edwards syndrome:
1. It is an autosomal chromosomal disorder due to an extra copy of chromosome 18.
 2. It is a very severe genetic condition that affects child's body development and growth.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 37.** With reference to G-33, consider the following statements:
1. The G33 (the Friends of Special Products in agriculture) is a coalition of developed and developing countries.
 2. India is not a member of this group.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 38.** Consider the following statements regarding Garbhini-GA2:
1. It is the first India-specific artificial intelligence (AI) model to precisely determine the age of a foetus in a pregnant woman in the second and third trimesters.
 2. It has been designed by researchers at the Indian Institute of Technology Madras and the Translational Health Science and Technology Institute (THSTI), Faridabad.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 39.** With reference to Aerosols, consider the following statements:
1. They are tiny solid or liquid particles suspended in air or a gas.
 2. Aerosols can be natural, such as fog or gas from volcanic eruptions, or artificial, such as smoke from burning fossil fuels.
 3. Aerosol particles are either emitted directly into the atmosphere (primary aerosols) or produced in the atmosphere from precursor gases (secondary aerosols).
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
- 40.** Consider the following statements regarding Additional Tier-1 (AT-1) Bonds:
1. AT-1 bonds are perpetual bonds with no maturity date.
 2. Investors in these bonds get their principal back.
 3. AT-1 bonds have a lower interest rate than other bonds.
- How many of the statements given above is/are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None

- 41.** Consider the following statements regarding General Diary (GD) and First Information Report (FIR):
1. A copy of each FIR is sent to the superior officers and to the concerned Judicial Magistrate whereas copy of GD is not sent to the Judicial Magistrate, though its copy is sent to a superior police officer.
 2. The general diary is an internal police record, while in the case of FIR, a copy of these will be provided to the complainant.
- Which of the above statements is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 42.** Arrange the following countries in descending order in terms of Nominal GDP (Gross domestic product):
1. India
 2. China
 3. USA
 4. Germany
 5. Japan
- Choose the correct answer:
- (a) 3-2-4-1-5
 - (b) 3-2-5-1-4
 - (c) 3-2-4-5-1
 - (d) 3-2-5-4-1
- 43.** Consider the following statements with respect to National Coal Index:
1. It is price index that incorporates prices from all sales channels and plays a vital role in the auction process in the Commercial Mining of Coal Blocks.
 2. The base year for the index is 2011-12.
 3. The concept and design of the Index is developed by the Central Mine Planning and Design Institute (CMPDI).
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
- 44.** Consider the following statements with respect to the State of India's Digital Economy (SIDE) Report, 2024:
1. It is released biannually by the NITI Aayog.
 2. India is the third largest digitized country in the world after the US and China.
 3. The ranking is based on the 5 pillars of Connect, Harness, Innovate, Protect and Sustain (CHIPS) framework.
- How many of the above statements is/are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
- 45.** Consider the following statements with respect to VAIBHAV Scheme:
1. It aims to connect the Indian STEM diaspora with Indian academic and R-D institutions.
 2. The Scheme is being implemented by the Department of Science and Technology.
 3. The fellowship is open to all scientists working in Indian Institutes of Technology (IIT).
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All Three
 - (d) None
- 46.** Consider the following statements with respect to International Energy Agency (IEA):
1. It was created in 1974 to help co-ordinate a collective response to major disruptions in the supply of oil.
 2. The membership in Organisation for Economic Co-operation and Development (OECD) is a prerequisite to become a full-time member in IEA.
 3. The Emissions Gap Report is an initiative of IEA.
- How many of the statements given above are incorrect?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
- 47.** Consider the following statements with respect to Indian Skimmer:
1. It is a migratory species that breeds in Russia and East Asia.
 2. They spend most of their life cycle above the treeline.
 3. It is listed under the Convention of Migratory Species (CMS).
- How many of the statements given is/are

above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

48. Consider the following statements with respect to Article 142:

1. It bestows the Supreme Court with extraordinary authority to ensure complete justice in situations where existing laws or statutes may lack adequate remedies.
2. Orders or decrees issued under Article 142 must adhere to existing laws established by the Parliament.
3. Article 142 is not universally applicable and may not be invoked in every case.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

49. Consider the following statements:

1. Collaborate with any international agency for development of cooperative marketing for mutual advantage in India or abroad.
2. Act as warehouse under the Warehousing Act.
3. Facilitate, coordinate and promote the marketing and trading activities of the cooperative institutions.
4. Under takes grading, packing, standardization, scientific treatment and process of agricultural produce and other articles.

Which of the above are the objectives of the National Agricultural Cooperative Marketing Federation of India (NAFED)?

- (a) 1, 3 and 4 only
- (b) 2, 3 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

50. Consider the following statements with respect to Outcome Budgeting:

1. It links the outlay of funds by various government ministries and departments to their expected outcomes.
2. The concept of outcome budgeting was introduced in India in 2005.
3. It is mandatory for all State Legislative Assemblies to follow Outcome budgeting.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

51. U-Report, a digital community for young people, is an initiative of :

- (a) Climate Action Network (CAN)
- (b) International Telecommunication Union (ITU)
- (c) United Nations Children's Fund (UNICEF)
- (d) United Nations Educational, Scientific and Cultural Organization (UNESCO)

52. Consider the following statements with respect to Indira Gandhi National Centre for the Arts:

1. It is an autonomous organisation established in 1987 by the Prime Minister Smt. Indira Gandhi.
2. It works under the aegis of the Ministry of Culture.
3. It is a cultural repository and the custodian of ancient texts.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

53. Consider the following statements with respect to INSAT-3DS Mission:

1. It was launched using a Geosynchronous Satellite Launch Vehicle (GSLV).
2. The mission is fully funded by the Ministry of Earth Sciences (MoES).
3. The mission will help in environment monitoring, weather forecasting and disaster relief operations.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

54. Consider the following statements with respect to National Board for Wildlife (NBWL):

1. It is chaired by the Prime Minister with others members including chief of army staff and defence secretary.

2. It was constituted under the Wild Life (Protection) Amendment Act of 2002 replacing the Indian Board for Wildlife.
3. The board has to meet at least twice a year.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All Three
- (d) None

55. How Baleen Whales differ from the toothed whales?

1. Toothed whales sieve prey from seawater whereas Baleen whales actively hunt fish, squid and other sea creatures.
2. Blue whale is a baleen whale whereas dolphins and porpoises belonged to toothed whales.

Which of the statements given above is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

56. Morodharo, recently seen in the news is related to which of the following?

- (a) A recently discovered Harappan site near Dholavira
- (b) A carcinogenic substance found in the cotton candies
- (c) A town captured in Ukraine recently by the Russian Army
- (d) A largest Buddhist Monastery located in Tawang Valley of Arunachal Pradesh

57. Consider the following statements with respect to the Animal Welfare Board of India :

1. AWBI is a statutory advisory body set up under the Prevention of Cruelty to Animals Act, 1960.
2. AWBI works under the aegis of the Ministry of Environment Forest and Climate Change (MoEFCC).
3. Rajkumari Amrit Kaur pioneered the setting up of the Board, with its Headquarters at Chennai.

How many of the above statements is/are **incorrect**?

- (a) Only one
- (b) Only two
- (c) All Three

(d) None

58. Consider the following cities in news and the country in which they belong to:

Cities	-	Country
1. Rafah	-	Syria
2. Sinai	-	Saudi Arabia
3. Belgorod	-	Belgium
4. Angostura	-	Turkey

How many of the above pairs are matched correctly?

- (a) Only one
- (b) Only two
- (c) All Three
- (d) None

59. Consider the following:

1. Methane
2. Black Carbon
3. Hydrofluorocarbons
4. Ground-level ozone

Which among the above are known as super pollutants?

- (a) 1, 3 and 4 only
- (b) 1 and 2 only
- (c) 1, 2 and 3 only
- (d) 1, 2, 3 and 4

60. With reference to the Gharials, consider the following statements:

1. It is a schedule I species and listed as a critically endangered species by the International Union for Conservation of Nature (IUCN).
2. Gandak Gharial Recovery Project is an initiative of National Biodiversity Authority (NBA).
3. They live in saline waters and feed exclusively on fishes.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

61. With reference to Ellora Caves, consider the following statements:

1. The Ellora caves are located in the district of Aurangabad in Maharashtra.
2. The caves were declared as a UNESCO world heritage site in 1983.
3. The topography of the area consists of a rocky plateau in the shape of a semicircle.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

62. Consider the following statements with respect to Rajya Sabha:

1. The Members of the Rajya Sabha are elected through proportional representation by single transferable vote.
2. The Constitution has fixed the term of office of members of the Rajya Sabha.
3. The President nominates 12 members who have experience in art, science, sports and social service to Rajya Sabha.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

63. Consider the following statements with respect to Whips:

1. The office of whip is neither mentioned in the Constitution of India nor in the Rules of the House nor in a Parliamentary Statute.
2. In India, all parties can issue whips to their members.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

64. Consider the following statements with respect to Interception Order:

1. The Home secretary, both at the central and the state level is the nodal agency to execute orders to intercept, monitor and decrypt information.
2. The surveillance data is to be deleted within six months.
3. The IT Rules, 2009, specify the procedure and safeguards the government must follow for interception, monitoring, and decryption of information.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two

- (c) All three
- (d) None

65. Rising sea level and severe storms are gradually submerging the Tuvalu Island. Tuvalu is located in?

- (a) Arctic Ocean
- (b) Pacific Ocean
- (c) Indian Ocean
- (d) Southern Ocean

66. Consider the following statements regarding the differences between Buddhist and Jain literature:

1. Buddhist tales and literature are didactic in character While Jain tales are not.
2. Ancient/medieval Buddhist literature is available in Sanskrit While ancient/medieval Jain literature was not composed in Sanskrit.

Which of the above statements are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

67. Consider the following statements regarding Bhakti literature:

1. Gyaneswar was a Marathi bhakti poet.
2. Tukaram was a contemporary of Gyaneswar who wrote bhakti prose in Gujarati.
3. Eknath wrote poetic narratives and devotional abhangas.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

68. Consider the following statements:

1. Gandharva Veda, related with music, is an upaveda of the Atharva Veda.
2. The Jaimini Brahmana speaks collectively of dance and music.
3. Aitareya Aranyaka discusses musical instruments.
4. The first reference to musical theory was discussed in Bharata's Natyashastra.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three

(d) All four

69. Consider the following statements:
1. The Natya Shastra speaks of masks and their use in theatre.
 2. There is no evidence of the use of masks in the Indus Valley civilisation.
 3. Terracotta masks dating back to the fourth century have been excavated in eastern India.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

70. The triple headed rockcut Shiva, Maheshmurti, can be found in the cave of ?

- (a) Ajanta
- (b) Ellora
- (c) Elephanta
- (d) Malova

71. Consider the following statements regarding Pietra dura:

1. It consists of a series of long pillars used to support dome like structures.
2. It was used on a large scale in the Taj Mahal by Shah Jahan.

Which of the above statements is/are **incorrect**?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

72. Tirumalaipuram paintings were patronized under:

- (a) Vijayanagar Kingdom
- (b) Pandyas
- (c) Cholas
- (d) Pallavas

73. "Maseetkhani" style is associated with the:

- (a) Dara Sikoh
- (b) Jahangir
- (c) Ibrahim Lodi
- (d) Tansen

74. Consider the following statements regarding the political organizations during 19th century in India:

1. The Bangabhasha Prakasika Sabha was

formed by associates of Raja Ram Mohan Roy.

2. Bengal British India Society was set up by Sisir Kumar Ghosh in London.
3. Indian league was started in Calcutta by Ishwar Chandra Vidyasagar.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

75. Consider the following statements:

1. During the end of the eighteenth century and the early nineteenth century, a class of rich peasants known as jotedars consolidated their position in the villages and acquired vast areas of land.
2. Jotedars were loyal to the zamindars and helped them collect revenue from the ryots.

Which of the above statements is/are **incorrect**?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

76. Consider the following statements regarding Mauryan Empire:

1. Slavery was absent in Mauryan Empire.
2. Mauryan government had equal control over all the regions of its empire.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

77. Consider the following statements regarding the President's address to the Parliament of India as contained in Article 87 of the Constitution:

1. The address of the President highlights the government's accomplishments from the previous year and sets the broad governance agenda for the coming year.
2. After the President's address, the two Houses move a motion to thank the President for her speech.
3. Till now there are no instances of amendments passed to the motion of thanks in both the houses of the

parliament.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

78. Consider the following statements regarding Nominated members of Rajya Sabha.

1. The Constitution of India does not specify any qualifications for the appointment of nominated members of the Rajya Sabha.
2. Nominated members of Rajya Sabha enjoy all the powers and privileges to which the elected MPs are entitled.
3. They do have the right to vote in the election of the President and Vice-President of India.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

79. Consider the following statements regarding the Office of the Vice President of India.

1. The Constitution states that the Vice-President shall be the ex-officio Chairman of the House of the People.
2. The office of the Vice-President of India ranks next to the Chief Justice of India in the order of precedence.
3. The Vice-President shall be elected by the members of an electoral college consisting of the members of both Houses of Parliament in accordance with the system of proportional representation by means of the single transferable vote.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

80. Consider the following statements:

1. Exempted land reforms from scrutiny
2. Provided protection for backward classes in the Constitution.
3. Expanded the scope of restrictions on the right to free speech.

The first amendment to the Constitution of

India contained which of the above provisions?

- (a) Only 1
- (b) 1 and 2
- (c) 1, 2 and 3
- (d) None

81. Consider the following statements.

1. The Constitution permits the Central government to make laws when Parliament is not in session.
2. Governor of a state can issue ordinances only with the approval of the President.
3. An ordinance can be re-promulgated only once.

Which of the above statements is/are **incorrect**?

- (a) 3 only
- (b) 2 only
- (c) 2 and 3
- (d) 1, 2 and 3

82. Consider the following statements regarding the Panel of Vice-Chairpersons of Rajya Sabha.:

1. The Chairman of the Rajya Sabha nominates a panel of vice-chairpersons from among the members.
2. In the absence of the Chairman or the Deputy Chairman of Rajya Sabha, any of the panel members can preside over the House.
3. According to the Rajya Sabha Rules, nominated members of the Rajya Sabha are not eligible to become the member of the panel.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

83. Consider the following statements:

1. The Governor is the head of the state's executive power, and acts only on the advice of the council of ministers in all matters.
2. While the Governor does not have to seek anyone's advice while appointing the Chief Minister, he can appoint a minister only on the recommendation of the Chief Minister.
3. The Governor can determine the time needed for a party to prove its majority or

which party must be called first to do so, in a hung Assembly.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

84. Consider the following statements regarding Prompt Corrective Action (PCA) of Reserve Bank of India.

1. It aims to monitor the operation of weaker banks more closely to encourage them to conserve capital and avoid risks.
2. It imposes certain restrictions on dividend distribution and expansion of branches by banks that are financially weak.

Which of the above statements is/are **incorrect**?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

85. The “doctrine of essentiality” is often used by the courts in relation to which of the following Articles of Indian Constitution?

- (a) Article 14
- (b) Article 19
- (c) Article 21
- (d) Article 25

86. Gross Domestic Capital Formation (GDCF), often seen in the Budget and Economic Surveys, essentially refers to:

- (a) Money circulation in public hands
- (b) Capitalization of the Banking sector
- (c) Direct Retail Investment in consumer goods sector
- (d) Creation of Infrastructure or durable economic assets

87. The Supreme Court’s ruling in Lily Thomas Vs Union of India case is related to :

- (a) Right to life under Article 21
- (b) National Judicial Appointments Commission
- (c) Disqualification of Member of Parliament
- (d) Right to Fair Compensation and Transparency in Land Acquisition.

88. Consider the following statements:

1. Different tiers of government govern the

same citizens, but each tier has its own jurisdiction.

2. The existence and authority of each tier of government generally is constitutionally guaranteed.
3. Each tier of government must draw all its financial resources independent of the other tier.

Which of the above is/are the features of Federalism?

- (a) 1 only
- (b) 1 and 2
- (c) 1 and 3
- (d) 1, 2 and 3

89. A federal government means a government in which:

- (a) There is division of powers between the Central and state governments; and also between the federal and state judiciaries.
- (b) All the powers are vested in the national government and the regional governments derive their authority from the national government.
- (c) A large number of powers are vested in the national government and the regional governments, with some independent powers, derive their authority from the national government.
- (d) Powers are divided between the national government and the regional governments by the Constitution and both operate in their respective jurisdictions independently.

90. Part IX of the Constitution of India contains provisions regarding:

1. Panchayats
2. Municipalities
3. Cooperative societies

Select the correct answer :

- (a) 1 only
- (b) 1 and 2
- (c) 1 and 3
- (d) 1, 2 and 3

91. Consider the following statements:

1. The guidelines for registration of political parties are issued under Representation of the People Act, 1951.
2. The Election Commission of India (ECI) has statutory power to enforce internal democracy in political parties and to ensure that their leadership is renewed,

changed or re-elected every five years.

Which of the above statements is/are **incorrect**?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

92. Consider the following statements:

1. The Representation of the People Act, 1951 bars associations with religious connotations to register as political parties.
2. The Constitution of India provides Election Commission of India (ECI) the power to deregister political parties.
3. Election Symbols (Reservation and Allotment) Order, 1968 bars political parties from having symbols with religious or communal connotations.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

93. Consider the following statements regarding Comptroller and Auditor General of India (CAG):

1. CAG is a constitutional body, who is the head of the Indian Audit and Accounts Department.
2. The duty of CAG is to uphold the Constitution of India and the laws of Parliament in the field of financial administration.
3. CAG is the guardian of the public purse and controls the financial system of the country at both the levels- the centre and state.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

94. Consider the following statements:

1. All members should be elected by the house.
2. It presents its report to the Speaker or the Chairman of the house.
3. It must have the status of a consultative committee with any Ministry at the

Centre.

Which of the above is/are some of the general characteristics of Parliamentary committees?

- (a) Only 2
- (b) 1 and 2
- (c) 1 and 3
- (d) 1, 2 and 3

95. Consider the following statements regarding Temperate Rainforests.

1. Temperate rainforests are found mostly in coastal, mountainous areas.
2. Cooler temperatures and a more stable climate slow down decomposition, allowing more material to accumulate.
3. Temperate rainforests are the most biologically diverse terrestrial ecosystems in the world.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

96. Which of the following lake is not part of Great Lakes region of North America?

- (a) Lake Ontario
- (b) Great Slave Lake
- (c) Michigan Lake
- (d) Lake Erie

97. Which of the following statement best describes 'Doldrums'?

- (a) Frigid zone of the earth where there is little atmospheric circulation.
- (b) Belt of calm region in equatorial region where prevailing trade winds meet.
- (c) Tropical region in Indian ocean where cyclone often originate.
- (d) High pressure area in subtropical region where westerlies originate.

98. Consider the following statements regarding Fold Mountains:

1. Fold Mountains are created when large areas are broken and displaced vertically.
2. They are least likely to have conical peaks.

Which of the above statements is/are **incorrect**?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

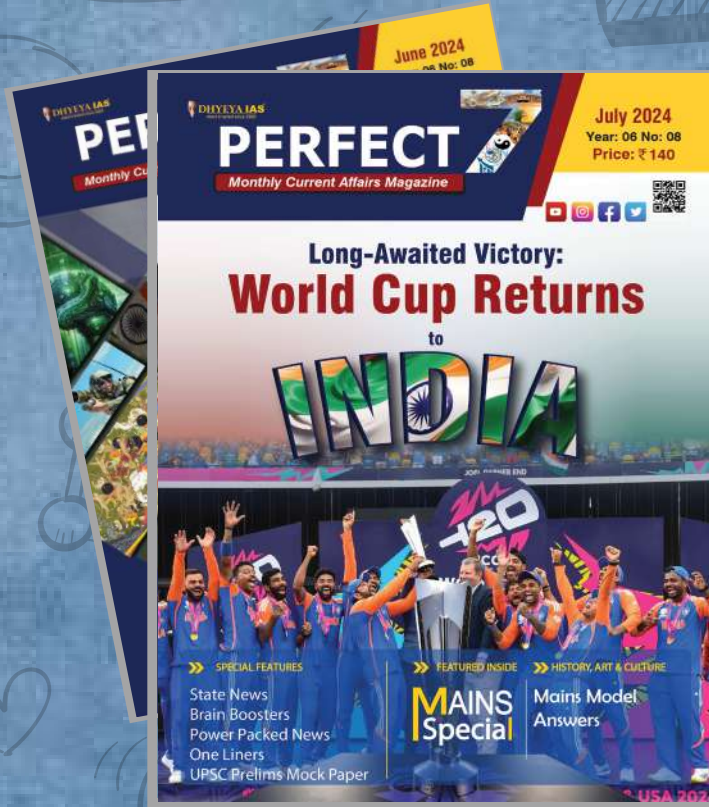
99. Consider the following statements regarding Thermosphere.
1. In thermosphere temperature decreases very rapidly with increasing height.
 2. Radio waves transmitted from the earth are reflected back to the earth by this layer.
 3. The space shuttle and the International Space Station both orbit Earth within the thermosphere.
- How many of the above statements is/are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
100. Which of the following are the conditions for the emergence of a tropical cyclone?
1. Unstable condition through the Troposphere
 2. Strong Coriolis force
 3. Strong vertical wind
 4. Large and continuous supply of warm and moist air.
- Select the correct answer:
- (a) 1, 2 and 3
 - (b) 1, 2 and 4
 - (c) 2, 3 and 4
 - (d) 1, 2, 3 and 4

ANSWER

1	a	21	a	41	c	61	d	81	c
2	c	22	c	42	c	62	b	82	b
3	d	23	b	43	a	63	c	83	b
4	a	24	a	44	b	64	c	84	d
5	b	25	c	45	b	65	b	85	d
6	a	26	c	46	a	66	d	86	d
7	c	27	b	47	d	67	b	87	c
8	b	28	d	48	c	68	c	88	b
9	b	29	a	49	d	69	b	89	d
10	b	30	c	50	b	70	c	90	d
11	b	31	a	51	c	71	a	91	b
12	b	32	b	52	b	72	b	92	b
13	b	33	c	53	c	73	d	93	b
14	c	34	c	54	c	74	a	94	a
15	c	35	c	55	b	75	b	95	b
16	d	36	c	56	a	76	d	96	b
17	c	37	d	57	b	77	b	97	b
18	d	38	c	58	d	78	a	98	c
19	d	39	c	59	d	79	a	99	b
20	c	40	a	60	a	80	c	100	b

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