

NEWS JUICE MONTHLY

1st May to 31st May, 2023

Relevant news of The Hindu, The Indian Express & The PIB
from Civil Services Exam Point of View!

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Message from Shubham Singla

Author

Civil Services Coach

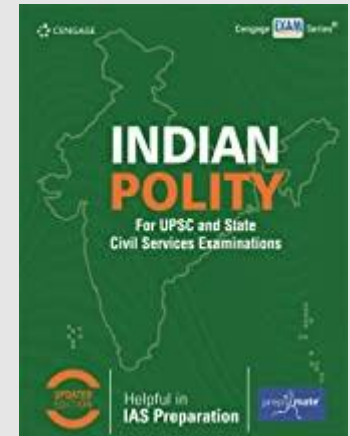
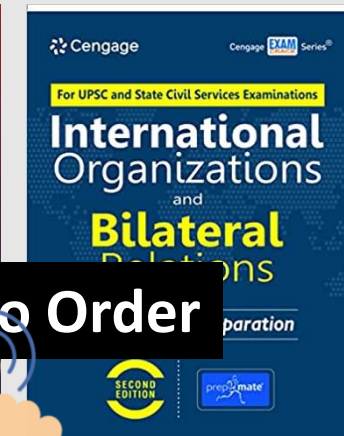
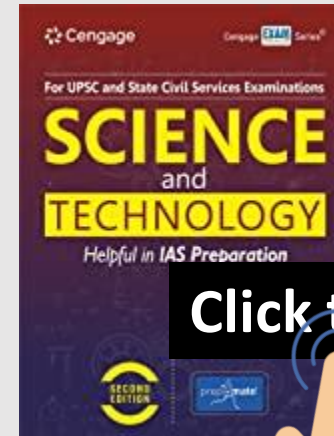
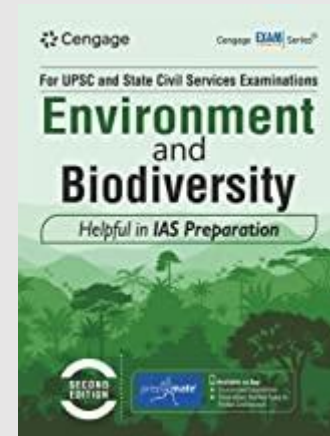
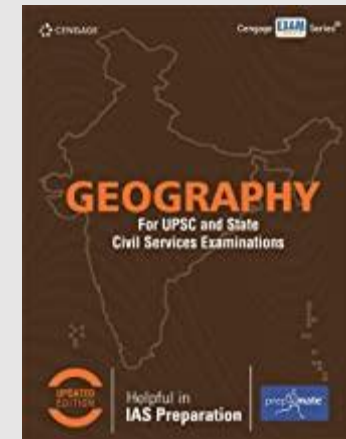
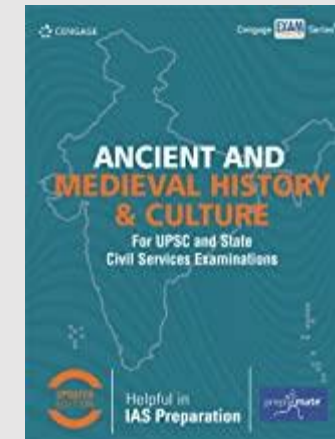
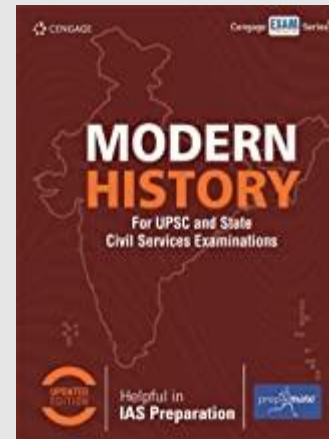
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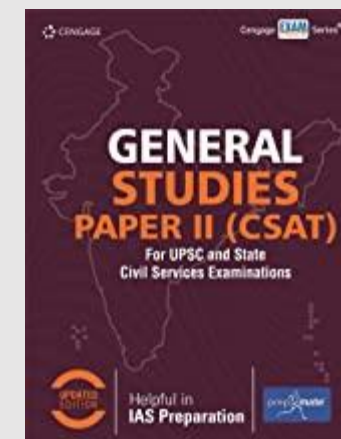
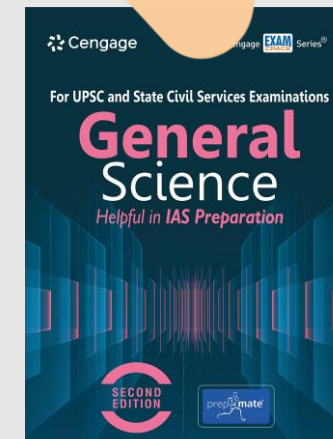
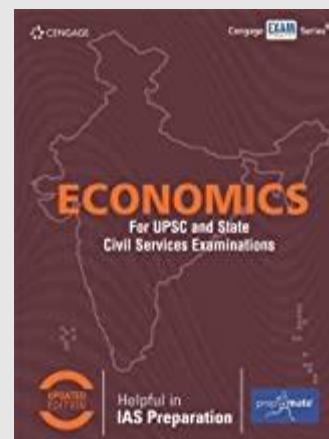
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POLITY & GOVERNANCE

Siddhartha Mohanty set to become LIC chairperson and first CEO



Relevance: Prelims; Polity & Governance

Why in news?

- The govt. has approved the appointment of Siddhartha Mohanty, Managing Director (MD) and interim chairperson, Life Insurance Corporation of India (LIC) as Chairperson till June 29, 2024.
- Thereafter, Mr. Mohanty has been named as Chief Executive Officer and Managing Director till June 7, 2025.



Challenges before him

- Mohanty will lead LIC at a time when it will have to conduct its business as a publicly owned company. Notably, LIC got listed last May in what was India's biggest initial public offering.
- Competition from private insurers has also intensified in recent years. The new CEO will also have to guard against any adverse fallout from recent controversies such as its investments in the Adani group of companies.
- He will also need to keep watch on the working of his company's employees. Notably, last week, SEBI barred a LIC employee from the securities market for front trading, an illegal practice.
- Front-running is trading stock or any other financial asset by a broker who has inside knowledge of a future transaction that is about to affect its price substantially. A broker may also front-run based on insider knowledge that their firm is about to issue a buy or sell recommendation to clients that will almost certainly affect the price of an asset.
- LIC's total assets under management (AUM) as on Dec 31, 2022, were ₹44.35 lakh crore, a 10.5% year-on-year increase from ₹40.1 lakh crore on Dec 31, 2021.

PM addresses programme marking 20 years of SWAGAT Initiative



Relevance: Prelims & Mains Paper II; Polity & Governance

Why in news?

- Prime Minister Narendra Modi recently addressed a programme marking 20 years of completion of the StateWide Attention on Grievances by Application of Technology - SWAGAT Initiative in Gujarat.

What is SWAGAT?

- **SWAGAT (State Wide Attention on Grievances by Application of Technology)** was started by PM Modi in April 2003 when he was the Chief Minister of Gujarat.
- The main purpose of this programme was to **act as a bridge between the citizens and the govt by using technology to solve their day-to-day grievances in a quick, efficient and time-bound manner.**
- Over time, SWAGAT has become an effective tool to solve problems in a paperless, transparent and hassle-free manner.

How it functions?

- SWAGAT helps the common citizen **air his grievances directly to the Chief Minister. It is held on the fourth Thursday of every month wherein the Chief Minister interacts with citizens for grievance redressal.**
- Under the programme, **it is ensured that every applicant is informed of the decision. Proceedings of all applications are available online.**
- More than 99% of grievances submitted to date have been resolved.

Components

- The SWAGAT Online Programme has **four components: the State SWAGAT, District SWAGAT, Taluka SWAGAT and Gram SWAGAT.**
- **The Chief Minister himself attends public hearings during State SWAGAT.**
- **The District Collector oversees District SWAGAT while the Mamlatdar and a Class-1 Officer head the Taluka SWAGAT.**
- **In Gram SWAGAT, citizens file the application from the 1st to the 10th of every month to the Talati/Mantri. These are included in the Taluka SWAGAT program for redressal.**
- **In addition, a Lok Fariyad program is also operational for citizens wherein they file their grievances at the SWAGAT Unit.**

Awards

- The SWAGAT Online Programme has been given various awards over the years, **including the United Nations Public Service Award in 2010 for improving transparency, accountability and responsiveness in public service.**
- **Notably, due to SWAGAT, Gujarat received the gold award from the Government of India for e-governance during the Congress regime in 2011.**

Supreme Court rules it can directly grant divorce to couples under Article 142



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- A five-judge Constitution Bench of the Supreme Court has ruled that it can exercise its plenary power to do “complete justice” under Article 142(1) of the Constitution to dissolve a marriage on the ground that it had broken down irretrievably, without referring the parties to a family court where they must wait 6-18 months for a decree of divorce by mutual consent.
- The Bench led by Justice S K Kaul held that the court could, in the exercise of this power, waive the mandatory six-month waiting period for divorce under The Hindu Marriage Act (HMA), 1955, and allow the dissolution of the marriage on grounds of irretrievable breakdown even if one of the parties was not willing. (Shilpa Sailesh vs Varun Sreenivasan case)

Project Details

- Section 13B of the HMA provides for “divorce by mutual consent”.
- Both parties to the marriage must together file a petition to the district court “on the ground that they have been living separately for a period of one year or more, that they have not been able to live together and that they have mutually agreed that the marriage should be dissolved”.
- Under Section 13B(2) of the Act, the parties must move a second motion before the court “not earlier than six months after the date of the presentation of the [first] petition...and not later than eighteen months after the said date, if the petition is not withdrawn in the meantime”.
- The mandatory six-month wait is intended to give the parties time to withdraw their plea.

(more ahead)

Cont'd

- A **petition** for divorce by mutual consent can be moved **only after a year of the marriage**. However, **Section 14 of the HMA** allows a **divorce petition sooner** in case of “**exceptional hardship to the petitioner or of exceptional depravity on the part of the respondent**”.
- A waiver of the six-month waiting period under Section 13B(2) can be sought in an exemption application filed before the family court.
- In its 2021 ruling in Amit Kumar vs Suman Beniwal, the SC said, “Where there is a chance of reconciliation, however slight, the cooling period of six months from the date of filing of the divorce petition should be enforced. However, if there is no possibility of reconciliation, it would be meaningless to prolong the agony of the parties to the marriage.”
- The process of **obtaining a decree of divorce is often time-consuming and lengthy** owing to **a large number of similar cases pending before family courts**.

Article 142

- Under Subsection 1 of Article 142, the Supreme Court “may pass such decree or make such order as is necessary for doing complete justice in any cause or matter..., and any decree so passed or order so made shall be **enforceable throughout the territory of India**”.
- The present case was originally filed in 2014, where the parties sought a divorce under Article 142.

“Irretrievable breakdown”

- The first and most “obvious” condition in deciding if a marriage has irretrievably broken down is that the court should be fully convinced and satisfied that the marriage is “totally unworkable, emotionally dead and beyond salvation and, therefore, dissolution of marriage is the right solution and the only way forward”.
- The court laid down the following factors:
 - the period of time that the parties had cohabited after marriage;
 - when the parties had last cohabited;
 - nature of allegations made by the parties against each other and their family members;
 - orders passed in the legal proceedings from time to time;
 - cumulative impact on the personal relationship;
 - whether, and how many attempts were made to settle the disputes by a court or through mediation, and when the last attempt was made.
- The court also noted that the period of separation should be sufficiently long, and “anything above six years or more will be a relevant factor”.
- It emphasised the need to evaluate the factors according to the economic and social status of the parties, including their educational qualifications; whether they have any children; their age; and whether the spouse and children are dependents.

Panel probing wrestlers' allegations points to the absence of Internal Complaints Committees



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Prominent Indian wrestlers have continued protesting at Jantar Mantar in New Delhi for nearly two weeks.
- They have knocked on the door of the Supreme Court to get FIRs filed and appealed to fellow sportspersons to lend their weight to their complaints of sexual harassment even as the prime accused has refused to resign from his post.
- As the Govt appointed MC Mary Kom-headed panel looked into allegations of sexual harassment by some of India's top wrestlers against Wrestling Federation of India chief and BJP MP Brij Bhushan Sharan Singh, it found a major shortcoming!
- There was no Internal Complaints Committee (ICC), as mandated by law under the 2013 Prevention of Sexual Harassment at Workplace (PoSH) Act.
- Notably, the WFI is not alone in doing so. As many as 16 of the 30 national sports federations do not meet this mandatory compliance.
- This is happening when there has seen a huge rise in women's participation in sports. Their number in the Khelo India Games showed a 161% increase from 2018 to 2020.

What is the Internal Complaints Committee?

- The ICC was designed to be **the first resort for any grievance under the PoSH Act**, a key element needed to create a safe workplace environment for women.
- As per the law, **it needs to have a minimum of four members – at least half of them women – of whom one shall be an external member, preferably from an NGO or an association that works for women's empowerment or a person familiar with issues related to sexual harassment, like a lawyer.**
- In fact, **a functional ICC is one of the key conditions set up by the Ministry of Sports to grant annual recognition to the federations.**

Govt's actions till now

- The Union Sports Ministry, on the day of the formation of the Mary Kom-led committee, **sent a letter to all national sports federations flagging the importance of the ICC**
- While it noted that “most bodies have the necessary structures in place,” the letter called on sports federations to “re-examine their structures and policies” and make necessary changes to comply with the requirements of the PoSH law.

Provisions under the Prevention of Sexual Harassment (PoSH) Act, 2013



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- A recent investigation by a newspaper has revealed that **more than half — 16 — of India's 30 national sports federations do not have an Internal Complaints Committee (ICC), a legal requirement under the Prevention of Sexual Harassment (PoSH) Act, 2013.**
- Even the **Govt appointed MC Mary Kom-headed panel** looked into allegations of sexual harassment by some of India's top wrestlers against Wrestling Federation of India chief and BJP MP Brij Bhushan Sharan Singh **also pointed out this shortcoming.**

What is PoSH Act?

- **The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, commonly known as the PoSH Act, was passed in 2013.**
- It defined **sexual harassment**, lay down the **procedures for complaint and inquiry**, and the **action to be taken in cases of sexual harassment.**

How it come about?

- The 2013 law broadened and gave legislative backing to what are known as the Vishaka Guidelines, which were laid down by the Supreme Court in a judgment passed in 1997.
- The case in question was filed by women's rights groups, including one called Vishaka, over the alleged gangrape of a social worker from Rajasthan named Bhanwari Devi.
- Bhanwari had fought against the marriage of a one-year-old baby girl in 1992, and had been allegedly gangraped as revenge.
- The Vishaka Guidelines defined sexual harassment and imposed three key obligations on institutions — prohibition, prevention, redress. The Supreme Court directed that they should establish a Complaints Committee, which would look into matters of sexual harassment of women at the workplace. The court made the guidelines legally binding.

Guidelines regarding complaints committee

- The PoSH Act subsequently mandated that every employer must constitute an Internal Complaints Committee (ICC) at each office or branch that had 10 or more employees.
- It defined various aspects of sexual harassment, and lay down procedures for action in case of a complaint.
- In effect, the Act protects the rights of all women who are working or visiting any workplace, in any capacity.

What comes under Sexual harassment?

- Under the 2013 law, the following acts come under the scope of sexual harassment:
 - Physical contact and advances
 - A demand or request for sexual favours
 - Sexually coloured remarks
 - Showing pornography
 - Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

- As per the Ministry of Women & Child Development's Handbook, sexual harassment at the workplace broadly includes:
 - Sexually suggestive remarks or innuendo; serious or repeated offensive remarks; inappropriate questions or remarks about a person's sex life;
 - Display of sexist or offensive pictures, posters, MMS, SMS, WhatsApp, or emails;
 - Intimidation, threats, blackmail around sexual favours;
 - Threats, intimidation or retaliation against an employee who speaks up about these;
 - Unwelcome social invitations with sexual overtones, commonly seen as flirting; and
 - Unwelcome sexual advances.

- In addition, the PoSH Act mentions five circumstances that amount to sexual harassment:
 - Implied or explicit promise of preferential treatment in her employment;
 - Implied or explicit threat of detrimental treatment;
 - Implied or explicit threat about the complainant's present or future employment status;
 - Interference with the complainant's work or creating an offensive or hostile work environment;
 - Humiliating treatment of the complainant that is likely to affect her health or safety.

Complaint procedure

- It is not compulsory for the aggrieved victim to file a complaint for the ICC to take action. The Act says that she “may” do so — and if she cannot, any member of the ICC “shall” render “all reasonable assistance” to her to complain in writing.
- If the woman cannot complain because of “physical or mental incapacity or death or otherwise”, her legal heir may do so.
- Under the Act, the complaint must be made “within three months from the date of the incident”. However, the ICC can “extend the time limit” if “it is satisfied that the circumstances were such which prevented the woman from filing a complaint within the said period”.
- The ICC “may”, before inquiry, and “at the request of the aggrieved woman, take steps to settle the matter between her and the respondent through conciliation” — provided that “no monetary settlement shall be made as a basis of conciliation”.
- The ICC may either forward the victim’s complaint to the police, or it can start an inquiry that has to be completed within 90 days. The ICC has powers similar to those of a civil court in respect of summoning and examining any person on oath, and requiring the discovery and production of documents.
- When the inquiry is completed, the ICC must provide a report of its findings to the employer within 10 days. The report must also be made available to both parties.
- The identity of the woman, respondent, witness, any information on the inquiry, recommendation and action taken, should not be made public.

Procedure after the ICC's filing of report

- If the allegations of sexual harassment are proved, the ICC will recommend to the employer to take action "in accordance with the provisions of the service rules" of the company. These may vary from company to company.
- The ICC may also recommend that the company deduct the salary of the person found guilty, "as it may consider appropriate". The compensation is determined based on five aspects: suffering and emotional distress caused to the woman; loss in career opportunity; her medical expenses; income and financial status of the respondent; and the feasibility of such payment.
- If either the aggrieved woman or the respondent is not satisfied, they may appeal in court within 90 days.

Protection against a false complaint

- Section 14 of the Act deals with punishment for false or malicious complaint and false evidence.
- In such a case, the ICC "may recommend" to the employer that it takes action against the woman, or the person who has made the complaint, in "accordance with the provisions of the service rules".
- The Act, however, makes it clear that action cannot be taken for "mere inability" to "substantiate the complaint or provide adequate proof".

World Press Freedom Index 2023 and methodology



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The non-profit organisation Reporters Without Borders has released the 2023 edition of the World Press Freedom Index.
- India has slipped 11 places to the 161st rank out of 180 countries – ranking below countries such as Somalia (141), Pakistan (150), and Afghanistan (152).
- The Indian govt, on its part, has rejected the country's low ranking citing a very low sample size, little or no weightage to fundamentals of democracy, and adoption of a methodology which is questionable and non-transparent.

What is Reporters Without Borders?

- Reporters Without Borders or Reporters Sans Frontiers (in French) is a global media watchdog headquartered in Paris, France, and it publishes a yearly report on press freedom in countries across the world.
- Founded in 1985, RSF claims to be a strong defender and promoter of freedom of information. Recognised as a public interest organisation in France since 1995, RSF has consultative status with the United Nations, UNESCO, the Council of Europe and the International Organization of Francophonie (OIF).
- RSF has 134 correspondents around the world and is also involved in delivering daily updates on jailed journalists, instances of press censorship, etc. The organization insures journalists on missions in high-risk areas and lends helmets and bulletproof vests.
- It also assists them with legal action in case they are victims of abuse, and assists reporters forced to flee with asylum applications.
- One of its most visible initiatives is the World Press Freedom Index.

How does it measure press freedom?

- As per RSF, “Press freedom is defined as the ability of journalists as individuals and collectives to select, produce, and disseminate news in the public interest independent of political, economic, legal, and social interference and in the absence of threats to their physical and mental safety.”
- The index **then compares levels of press freedom globally based on this definition.**
- **It develops a score between 0 (for the worst possible performance in terms of securing press freedom) and 100 (the best possible score). This year, Norway scored 95.18 at the first position, North Korea was at 21.72 and India scored 36.62. A score below 70 falls under the ‘problematic’ category.**

- **[85 - 100 points]** good (green)
- **[70 - 85 points]** satisfactory (yellow)
- **[55 - 70 points]** problematic (light orange)
- **[40 - 55 points]** difficult (dark orange)
- **[0 - 40 points]** very serious (dark red)

More parameters

- This score is based on two indicators:
- *a tally of abuses against media and journalists in connection with their work, arrived at by monitoring and analysing news stories on journalists being imprisoned or killed.
- *a qualitative analysis of the situation in each country or territory based on the responses of “press freedom specialists”, including journalists, researchers, academics and human rights defenders, to an RSF questionnaire available in 24 languages.

Cont'd

- In India's case, RSF cites the **murder of journalist Shashikant Warishe this year**. He was reporting on the setting up of the Ratnagiri Refinery & Petrochemicals Ltd (RRPCL) in Barsu, a project which has faced stiff opposition from locals.
- In the questionnaire for qualitative analysis, having more than 100 questions, each country's score is evaluated after assessment of the state of media across five factors.
- They include - **the political context, legal framework, economic context, sociocultural context and safety**.

2023 Global Scenario

- The index states in 2023 that **"the environment for journalism is 'bad' in seven out of ten countries, and "satisfactory" in only three out of ten."**
- It also highlighted concerns of propaganda fake news, further heightened given the rise of artificial intelligence technology. **Programmes like Midourney, which can create lifelike images based on a simple text prompt**, were mentioned in this context.
- **The index accuses "North Korea (180th), China (179th), Vietnam (178th), and Myanmar (173rd) of suppressing journalism the most. It terms China as "The world's biggest jailer of journalists and press freedom advocates."**
- It also points to **the acquisition of media outlets by oligarchs** who maintain **close ties with political leaders** resulting in the **restriction of the free flow of information**.

Bombay HC directs FM channels to pay royalties to composers and lyricists



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Bombay High Court has ruled that **FM radio channels cannot use copyrighted music without paying royalties to composers and lyricists.**
- As per the Court, the law has changed to protect “original authors” after the 2012 amendment of the Copyright Act.
- The FM channels, on their part, had argued that **the aforesaid amendments are “clarificatory in nature”** and do not impact the licence agreements between them and the producers.

Case in point

- **In Dec. 2020, the Intellectual Property Appellate Board (IPAB) fixed royalties for radio broadcasts at 2% of the Net Advertisement Revenues.** The IPAB also stated that after the 2012 amendments, **a “shared right” exists between the author and whoever owned the copyright.**
- In 1977, the Supreme Court in ‘IPRS v Eastern India Motion Pictures’ held that **the copyright for works created for incorporation in a film divests from the original author and vests in the producer.**
- The IPRS argued that with the changes in the 2012 amendments, **original authors are also entitled to a share in royalties** and **not just the producer.**

The 2012 amendment

- This amendment recognised performers' rights under the copyright framework. It was widely acknowledged that authors of original literary and musical works didn't get their due, while the benefits of the work were reaped by the producers.
- In a series of additions to existing provisions, the 2012 amendment ensured that the rights of the original authors could not be overridden.
- A key change was Section 38 of the Copyright Act, 1957, as amended in 2012, which recognises "Performer's Rights". As per this provision, the performer will have the rights for any of his/her performance including, literary work, song, or movie, for the next 50 years.
- This amendment was brought to protect artists. For e.g, if the copyright of a song is licensed, it would not just be the producer who would get a royalty but the singer and lyricist would also be entitled to a share.
- Crucially, the rights under this provision cannot be waived or diluted through a contract, which means performers' rights cannot be transferred or sold through an agreement. This was done to ensure production houses are not able to simply buy out an artist, and that her work continues to remain with her.

Women's participation at the Republic Day parade



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Union Ministry of Defence is **planning to further increase the participation of women in next year's Republic Day parade.**
- This will be in line with the policy of recent years, **aimed at improving the availability of opportunities for women in India's defence forces.**
- An office memorandum issued last month said the Republic Day Parade 2024 will have **"only women participants" in contingents — marching and band — and tableaux,** among performances during the parade **at Kartavya Path.**
- As per govt. sources, **this would effectively mean having the maximum representation of women in the parade,** given that certain marching contingents like that of the Army's infantry cannot have women participants at present.

Past notable firsts for women officers

- An all-women contingent from the three forces — Army, Air Force and Navy made its debut at the 2015 event.
- Similarly, in the 2016 event, an all-women stunt contingent of the CRPF, named - 'Women Daredevils CRPF' participated.
- The year 2018 saw the participation of an all-women bikers contingent of the BSF.
- An all-women contingent of the Assam Rifles participated for the first time in 2019.
- In 2020, Tania Shergill led an all-men contingent in the Republic Day Parade as the first woman Parade Adjudicant.
- In the 2022 parade, the country's first woman Rafale fighter jet pilot Shivangi Singh was part of the IAF tableau.
- With 'Nari Shakti' being the theme of the 2023 parade, both the Navy and the Indian Air Force contingents were led by women officers.



Indian food safety watchdog flags misleading food ads



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Advertisement Monitoring Committee at the Food Safety and Standards Authority of India (FSSAI) recently identified 32 fresh cases of food business operators (FBOs) making misleading claims and advertisements.
- They were found to be in breach of the Food Safety and Standards (Advertisements & Claims) Regulations, 2018.
- As per the regulator, the total count of such offences has risen to 170 in the last six months. It urged FBOs to “desist from making any unscientific and/or exaggerated claims and advertisements to promote their product sales to avoid enforcement actions and in larger consumer interest.”

FSSAI's initial response

- While the food regulator did not name the violators, it confirmed that they scrutinised products in varied categories such as health supplements, organic products, fast-moving consumer goods (FMCG) products and staples, each endorsing certain health and product claims.
- The alleged violators include manufacturers and/or marketers of nutraceutical products, refined oils, pulses, flours, millet products, and ghee.
- The cases have now been referred to the concerned licensing authorities to issue notices and subsequently, withdraw the misleading claims or scientifically substantiate them.
- In the event of an unsatisfactory response, the claims/ads would either have to be withdrawn or modified. Failure to comply with the provisions thereafter would invite penalties of up to Rs 10 lakh apart from stringent punishments including the suspension or cancellation of licenses for repeated offences.
- Making deceptive claims or advertisements are punishable offences under Section-53 of the Food Safety and Standards Act, 2006.

Case in point

- Last month, allegations made **against health drink Bournvita** made major headlines. The FSSAI without naming any entity, said the health benefits attributed to a product must be based on **“statistically significant results from well-designated human intervention studies, conducted by or under the guidance of established research institutions”**.
- The allegations, **made by an influencer, were later withdrawn**, with Bournvita stating that the product adheres to **a “scientifically designed formula made with ingredients that are approved for use and all ingredients are declared on the pack”**.
- Notably, as per the CEO of the **self-regulatory organisation Advertising Standards Council of India (ASCI)**, about **500** of the **nearly 800 food processing ads** they reviewed, **were misleading in terms of content**.

Regulations to tackle misleading ads and claims



- There are varied regulations to combat misleading advertisements and claims, some are broad, while others are product specific.
- For e.g, FSSAI uses the Food Safety and Standards (Advertisements & Claims) Regulations, 2018 which specifically deal with food (and related products) while Central Consumer Protection Authority (CCPA)'s regulations cover goods, products and services.
- FSSAI seeks that **the claims made in the ads must be scientifically validated**.
- Product claims suggesting suitability for prevention, alleviation, treatment or cure of a disease, disorder or particular psychological condition is prohibited unless specifically permitted under the regulations of the FSS Act, 2006.

Definitions of 'natural', 'fresh', 'pure' and 'original' food products and nutritional claims



- A food product can be referred to as 'natural' if it is a single food derived from a recognised natural source and has nothing added to it. It should only have been processed to render it suitable for human consumption. The packaging too must be done sans chemicals and preservatives. Composite foods, a mixture of plant and processed constituents, cannot be called 'natural', instead, they can say 'made from natural ingredients'.
- 'Fresh' can be used for products which are not processed in any manner other than washing, peeling, chilling, trimming, cutting or irradiation by ionizing radiation or any other processing such that it remains safe for consumption with the basic characteristics unaltered. The regulations forbid the 'fresh' reference if the processing aims to achieve an extension in the shelf-life of the product.
- 'Pure' is to be used for single-ingredient foods to which nothing has been added and which are devoid of all avoidable contamination, while unavoidable contaminations are within prescribed controls. Compound foods cannot be described as 'pure' but can be referred to as 'made with pure ingredients' if they meet the mentioned criteria.
- 'Original' is used to describe food products made to a formulation, with a traceable origin that has remained unchanged over time. They do not contain replacements for any major ingredients. It may similarly be used to describe a unique process which has remained essentially unchanged over time, although the product may be mass-produced.
- Nutritional claims may either be about the specific contents of a product or comparisons with some other foodstuff. The product must provide equivalent nutritional value of a reference food.

Supreme Court may reconsider its past decision on ED chief's tenure



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Supreme Court has said it might revisit its 2021 ruling that the tenure of a superannuated officer may be extended only in exceptional circumstances.
- In 2021, the court was dealing with the appointment of Sanjay Kumar Mishra, Director of the Enforcement Directorate (ED).
- The SC has now reserved its judgment on a batch of petitions challenging the third extension given to Mishra.

The 2021 ruling

- In Sept. 2021, an SC Bench upheld the Centre's order extending the tenure of Mishra beyond two years. However, the Bench said that "extension of tenure...to officers who have attained the age of superannuation should be done only in rare and exceptional cases", and that such extensions "should be for a short period".
- As per the court, there is no restriction on the Central govt's power in appointing the Director of Enforcement beyond a period of two years.

ED chief's tenure

- Mishra was appointed to the post for two years by an order dated Nov. 19, 2018. On Nov. 13, 2020, the Centre extended his tenure by a year.
- The NGO Common Cause filed a PIL asking for the November 13, 2020 order to be set aside, on the ground that Mishra's overall tenure of three years violated Section 25 of the CVC Act.
- In Nov. 2021, with the one-year extension to Mishra coming to an end, then President Ram Nath Kovind signed ordinances that amended the laws governing the CBI and ED,
- It enabled the govt to keep the two chiefs in their posts for one year after the completion of their two-year terms and to keep giving these one-year extensions until they complete five years as chiefs.
- Mishra will complete five years as ED chief in Nov. The Centre has submitted that the extension was given due to a pending review by the Financial Action Task Force (FATF), the global terror funding watchdog, and that "continuity would help" the country. It has also said that Mishra would not remain in service after his term comes to an end in November.

Assam govt. gears up to ban polygamy



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Assam Chief Minister Himanta Biswa Sarma has said that the state govt will move to ban the practice of polygamy through “legislative action”.
- He added that an “expert committee” would be formed to examine this issue.

Practice of polygamy

- Polygamy is the practice of having more than one married spouse — wife or husband. The issue is governed both by personal laws and the Indian Penal Code (IPC).
- Traditionally, polygamy — mainly the situation of a man having more than one wife — was practised widely in India. The Hindu Marriage Act, 1955 outlawed the practice.
- IPC Section 494 penalises bigamy or polygamy. The offender may be jailed for up to seven years and shall also be liable to a fine.
- This provision does not apply to a marriage which has been declared void by a court — for example, a child marriage that has been declared void.
- The law also does not apply if a spouse has been “continually absent” for the “space of seven years”. This means a spouse who has deserted the marriage or when his or her whereabouts are not known for seven years, will not bind the other spouse from remarrying.

The second marriage

- Generally, the first wife files a complaint that her husband has remarried. The court will have to look into **whether the husband has entered into a legally valid second marriage.**
- This means that the second marriage **would have to be performed as per prescribed customs,** and the penal provision **will not apply for adulterous relationships that do not qualify as valid marriages under the law.**
- In Kanwal Ram and Ors v The Himachal Pradesh Administration (1965), **the Supreme Court reiterated the legal position that the standard of proof must be of marriage performed as per customs.**
- **Section 495 of the IPC protects the rights of the second wife in case of a bigamous marriage.**

Under Hindu law

- After Independence, **anti-bigamy laws were adopted by provincial legislatures including Bombay and Madras.** The Special Marriage Act, 1954, was a radical legislation that proposed the requirement of monogamy. Section 4 of the SMA requires that “at the time of marriage...neither party has a spouse living”.
- Parliament passed the Hindu Marriage Act (HMA) in 1955, outlawing the concept of having more than one spouse at a time. **Buddhists, Jains, and Sikhs are also included under the Hindu Marriage Code. The Parsi Marriage and Divorce Act, 1936, had already outlawed bigamy.** Under Section 17 of the HMA, bigamy is an offence.
- However, despite bigamy being an offence, **the child born from the bigamous marriage would acquire the same rights as a child from the first marriage under the law.**
- **A crucial exception to the bigamy law for Hindus is Goa, which follows its own code for personal laws.**
- These circumstances include **a case where the wife fails to conceive by the age of 25 or if she fails to deliver a male child by the age of 30.** However, Goa CM Pramod Sawant has said that **the provision for Hindus is virtually “redundant” and that “no one has been given the benefit of it since 1910”.**

Under Muslim law

- Marriage in Islam is governed by the Shariat Act, 1937. Personal law allows a Muslim man to have four wives. To benefit from the Muslim personal law, many men from other religions would convert to Islam to have a second wife.
- In a landmark ruling in 1995, the Supreme Court in *Sarla Mudgal v Union of India* held that religious conversion for the sole purpose of committing bigamy is unconstitutional. This position was subsequently reiterated in the 2000 judgment in *Lily Thomas v Union of India*.
- Any move to outlaw polygamy for Muslims would have to be a special legislation which overrides personal law protections like in the case of triple talaq.

Prevalence of polygamy in India

- The National Family Health Survey-5 (2019-20) showed the prevalence of polygamy was 2.1% among Christians, 1.9% among Muslims, 1.3% among Hindus, and 1.6% among other religious groups.
- The data showed that the highest prevalence of polygynous marriages was in the Northeastern states with tribal populations.

SC refuses to restore Thackeray as Maha CM, also raps Guv for ordering floor test



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Passing a **unanimous judgement** on the various issues related to the split in Shiv Sena in June 2022, **the Supreme Court made strong observations about the role of the then Governor of Maharashtra and the Speaker of the Legislative Assembly.**
- The court, however, **refrained from interfering with the proceedings related to disqualifying 16 MLAs, including Chief Minister Eknath Shinde.**



'Speaker to decide disqualification'

- Not intervening in the proceedings, the SC said the issue of disqualification ought to be decided **as per established procedures in law** and the Speaker is the appropriate authority for this under the Tenth Schedule of the Constitution, which lays down the anti-defection law.
- The Bench said in the present case, **there were "no extraordinary circumstances"** warranting the court adjudicating in the matter.

SC's directions to the Speaker

- The SC said that while deciding disqualification pleas, the Speaker **must consider the constitution of the Shiv Sena**, which was submitted to the Election Commission (EC) with the consent of both factions.
- It added that as the Tenth Schedule's third paragraph has been removed, **the 'split' in the party will no longer be a defence available to MLAs facing the proceedings.**
- **Paragraph 3 of the Tenth Schedule protected defectors as long as one-third of the members of a political party formed a separate group.**
- **It was removed by the Constitution (91st Amendment) Act, 2003, which came into effect on Jan 1, 2004.** The Court asked the Speaker to first determine **which of the factions constitute the political party** and take the call without **being influenced by the ECI order in that regard.**
- The SC also said the Speaker must not decide which faction constitutes the political party **on the "blind appreciation" of which group had a majority in the Assembly.**

'Governor didn't act in accordance with law'

- As per the SC, **then Maharashtra Governor Bhagat Singh Koshiyari was not justified in calling for a floor test on June 30, 2022, as he did not have the material to show that the incumbent govt had lost the confidence of the House.**
- The court said the Governor had acted upon an suggestion that **a section of the Shiv Sena wished to withdraw their support to the govt, even though the communication by some of the MLAs only expressed discontent about the Maha Vikas Aghadi alliance.**
- It said that the **power of the Governor to act without the aid and advice of the Council of Ministers is of an extraordinary nature, and must be exercised with circumspection within the limits of law.** It also said that the Governor is **not empowered to enter the political arena and play a role in inter or intra-party disputes.**

No reinstatement of Uddhav govt	Illegal appointment of Whip	Other key observations
<ul style="list-style-type: none"> - The Thackeray group had sought to restore the situation prior to June 29, 2022, seeking a ruling that Uddhav Thackeray's govt be reinstated. However, the SC said Thackeray did not face the floor test on June 30 and resigned. - The court said had Thackeray refrained from resigning, it could have considered a remedy to reinstate his govt. 	<ul style="list-style-type: none"> - As the Shiv Sena MLAs' rebellion was unfolding, the party chief whip, Sunil Prabhu, issued a whip directing all the MLAs to attend a meeting at CM Uddhav Thackeray's residence. Those in attendance passed a resolution to remove Eknath Shinde as Group Leader of its legislative party. - The Shinde-led faction issued its own resolution, removing Prabhu as the whip and appointing Bharat Gogawale in his place. After assuming office, Speaker Rahul Narvekar recognised Gogawale as the whip. 	<ul style="list-style-type: none"> - The SC also held that "it is the political party and not the legislature party which appoints the Whip (an official of a political party whose task is to ensure party discipline in a legislature) and the Leader of the party in the House". - Therefore, it said the Speaker must recognise only the whip and leader who are duly recognised by the political party. - The five-judge SC Bench referred certain issues related to its 2016 judgment in the Nabam Rebia case to a larger Bench. One of the issues is whether a notice for the removal of a Speaker would restrict the powers of the Speaker to issue disqualification notices to MLAs.

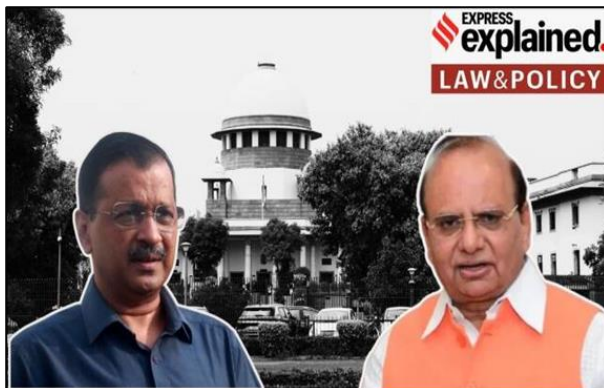
SC verdict hands Delhi govt control over administrative services



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Putting an end to an eight-year-long legal battle between the Aam Aadmi Party-led Delhi govt and the Centre, the Supreme Court has ruled that the Delhi govt has legislative and executive powers over administrative services in the national capital.
- The unanimous ruling by a five-judge Constitution Bench, headed by Chief Justice of India DY Chandrachud, said the decision would further “the basic structure of federalism”.



Background of this issue

- In 2015, a Union Home Ministry notification said that the Lieutenant Governor of Delhi shall exercise control over “services”.
- The Delhi govt challenged this before the Delhi High Court, which in 2017 upheld the notification. On appeal, a two-judge Bench of the Supreme Court referred the issue to a larger constitution Bench.
- In 2018, a five-judge Constitution Bench, in a unanimous verdict laid down the law that governs the relationship between Delhi and the Centre. The ruling was in favour of the Delhi govt.
- While the Constitution bench decided the larger questions, the specific issues were to be decided by a two-judge Bench. In 2019, two judges, delivered a split verdict on the specific issue of “services.” The split verdict then went to a three-judge Bench and eventually a five-judge Constitution Bench, which has now delivered its verdict.

The subject of dispute	Centre's argument	The court's decision
<ul style="list-style-type: none"> - The Supreme Court had to decide if it was the Delhi govt or the Union govt that had legislative and executive control over the capital's bureaucracy. - The court had to interpret clause (3)(a) of Article 239AA (Special provisions with respect to Delhi) of the Constitution. It reads: "Subject to the provisions of this Constitution, the legislative assembly shall have power to make laws for the whole or any part of the National Capital Territory with respect to any of the matters enumerated in the State list or in the Concurrent list in so far as any such matter is applicable to union territories except matters with respect to police, public order and land." 	<ul style="list-style-type: none"> - The Centre's argument was that in the 2018 ruling, the court did not analyse two crucial phrases in Article 239AA(3)(a). - First was "insofar as any such matter is applicable to union territories" and the second was "subject to the provisions of this Constitution." - The Centre argued that since no Union Territory has power over services, Delhi too could not exercise such power. Essentially, Delhi could only legislate on issues that other Union Territories are explicitly allowed to legislate upon. - The legislative power of Delhi extends to an entry only when that entry is clearly and unequivocally applicable to union territories as a class. 	<ul style="list-style-type: none"> - The SC concluded that Delhi under the constitutional scheme is a Sui Generis (or unique) model, and is not similar to any other Union Territory. It said Delhi is given a special constitutional status under article 239AA. - Article 239AA specifically excludes land, police and public order from the purview of the legislative powers of the Delhi govt. The court acknowledged that these three issues can also have some overlap with "services". - However, legislative and executive power over such services such as Indian administrative services, or joint card of services, which are relevant for the implementation of policies and vision of NCT of Delhi in terms of day to day administration of the region, shall live with Delhi - It is to be noted that this verdict was specifically pertaining to control over administrative services in Delhi.

Big win in Karnataka assembly polls takes Congress-ruled state tally to seven



Relevance: Prelims & Mains Paper II; Polity & Governance

Why in news?

- Congress has scored a resounding victory in the Karnataka Assembly Elections, **crossing well beyond the halfway mark of 113.**
- With a win in Karnataka, Congress will now be in power in **seven state assemblies.** In four of these – **Himachal Pradesh, Rajasthan, Chhattisgarh** and now **Karnataka** – it is in power **by itself.**
- **In three others – Bihar, Jharkhand and Tamil Nadu – it is a part of the ruling alliance.**

State-wise Details

➤ Himachal Pradesh

- Himachal Pradesh was the last state in which Congress won an assembly election (in 2022), the current term of the Himachal Pradesh Assembly is till 2027. In a 68-seat house, Congress holds 45 seats with **Sukhvinder Singh Sukhu** being the CM. The main opposition party - the BJP **won only 25 seats** on the back of an anti-incumbency wave and some major policy promises by the Congress, including **the rollback of the controversial New Pension Scheme** in the state.

➤ Rajasthan

- Rajasthan is one of the next few states going to the polls later this year. **In 2018, Congress won 100 out of 200 seats** in the Assembly elections and formed the govt under the leadership of **veteran Ashok Gehlot.** However, since then, the govt. has been marred **with infighting** between **Gehlot and Sachin Pilot.** The upcoming polls will prove to be a major challenge for Congress in trying to **retain control of the country's largest state by land area.**

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➤ Chhattisgarh

- Chhattisgarh also goes to polls in late 2023. In 2018, Congress trounced the BJP in Chhattisgarh, **winning 68 seats to the BJP's 15** in a 90-seat state assembly. It formed the govt in the state **after being in opposition for fifteen years – since 2003**. Then incumbent chief minister, BJP's **Raman Singh**, had been in power **for 15 years**. **Congress chose party's OBC face and popular leader Bhupesh Baghel** as the state's CM.

➤ Karnataka

- Congress has won a resounding victory in the southern state, winning **approximately double the number of seats as BJP**. Now Congress will have to decide who will be the CM. On one side is former Chief Minister and current Leader of Opposition **Siddaramaiah**. On the other hand, is firebrand politician **DK Shivakumar**.

States in which Congress is in coalition

Upcoming state polls in 2023

➤ Bihar

- In the 2020 Bihar Assembly Elections, Congress won only 19 seats, and was a part of the opposition alongside RJD, CPI (ML)L and CPI (M). However, CM Nitish Kumar of JD(U) withdrew from his alliance with the BJP and joined the then-opposing parties in 2022, to form a govt with a 2/3rd majority. Currently, Congress is a part of this ruling alliance and has two ministries with it.

➤ Jharkhand

- After the 2019 Jharkhand Assembly elections, an alliance of JMM (30 seats), Congress (16 seats) and RJD (1 seat) formed the govt, in the 81-seat house. Currently, the CM of Jharkhand is JMM supremo Hemant Soren, with Congress holding 4 ministerial portfolios in his govt.

➤ Tamil Nadu

- The 2021 Tamil Nadu Assembly elections were the first since the deaths of the state's two tallest leaders – M Karunanidhi (of DMK) and J Jayalalithaa (of AIADMK). The DMK-led Secular Progressive Alliance decisively won the elections with DMK securing 133 seats by itself. Congress, a part of this alliance, won 18 seats and thus is a part of the current MK Stalin-helmed govt.

- There are five more state assembly elections scheduled for this year – in Chhattisgarh, Madhya Pradesh, Mizoram, Rajasthan and Telangana.
- Congress is in power in two of these states and will face a tough challenge fighting off anti-incumbency and party infighting to retain these.
- It will also like to win back Madhya Pradesh, where it had formed the govt by a narrow majority in 2018 but failed to keep that majority amidst a spate of major defections, including that of current Union Civil Aviation Minister Jyotiraditya Scindia.

PM Modi-led panel appoints Praveen Sood as the new CBI Director



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The 1986-batch, Karnataka cadre Indian Police Service (IPS) officer Praveen Sood has been appointed the head of the Central Bureau of Investigation (CBI).
- A high-powered selection committee led by Prime Minister Narendra Modi was involved in the process.
- The 59-year-old has been appointed to the post **for a period of two years from the date of taking charge**, after Subodh Kumar Jaiswal completes his tenure on May 25.
- **Sood is the senior-most IPS officer in the country after Jaiswal.** His appointment comes soon after **recent allegations against him** by **Karnataka Pradesh Congress Committee (KPCC) head DK Shivakumar**, who is now a top contender **for the CM post** in the state following his party's recent win in the Legislative Assembly elections.

Profile

- **Sood is currently the Director General and Inspector General of Police, Karnataka State**, and is posted in Bengaluru. He is an alumni of IIT Delhi and IIM-Bangalore.
- After joining the bureaucracy, he started his career as Asstt. Superintendent of Police, Mysuru in 1989. He served as Superintendent of Police, Bellary and Raichur before getting posted to Bangalore city as Deputy Commissioner of Police, Law and Order.
- In 1999, he proceeded to foreign deputation as Police Advisor to the Govt of Mauritius for 3 years. He then took a time off for pursuing Post Graduation from IIM and the Syracuse University, in New York.
- In his career, he has **held the posts of Commissioner of Police of Mysuru city and Additional Commissioner of Police of Traffic, Bengaluru.**

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- Sood has been decorated with **Chief Minister's Gold Medal for excellence** in service in 1996, **Police Medal for Meritorious Service** in 2002 & **President's Police Medal for Distinguished Service** in 2011.
- He has also been appointed the Managing Director of Karnataka State Police Housing Corporation and the Principal Secretary of the Home Dept.



Who appoints the CBI director?



- The panel that selects the CBI chief **consists of the Prime Minister, the Leader of Opposition and Chief Justice of India**. The process of appointment was established by **the Supreme Court's Vineet Narain judgement (1997)**, and the **changes made to The Delhi Special Police Establishment (DSPE) Act, 1946 by The Lokpal and Lokayuktas Act, 2013**.
- While Modi and CJI DY Chandrachud agreed to appoint Sood as the next CBI chief, **Congress leader in Lok Sabha Adhir Ranjan Chowdhury**, who is the third member of the panel, opposed his selection.
- He is learnt to have said the govt should consider **women officers** and **those from minority communities** for this post.

Kerala amends Act to ensure safety of healthcare professionals



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Kerala govt. has decided to **amend the Kerala Healthcare Service Persons and Healthcare Service Institutions (Prevention of Violence and Damage to Property) Act**.
- It is aimed at **preventing attacks on health-care institutions and workers**.
- This move comes after **the death of a young house surgeon, Vandana Das**, at the hands of **an 'inebriated' patient** during a routine medical examination.
- This incident has revived fear among health-care workers about their own safety.
- Doctors have organised protests across the country, condemning this attack and urging authorities to ensure protection.
- Recent history is full of instances of **coordinated assaults on health-care workers** by **angry patients** or **their attendees disappointed with health outcomes**.

Strict punishments for offenders

- The Kerala amendment is progressive in that **it proposes to bring verbal abuse and violent acts causing simple and grievous hurt under the purview of the Act**.
- **Enhanced jail term (up to three years) and a hefty fine (up to ₹50,000)** for those found guilty are also being prescribed.
- The govt has **proposed time-bound speedy disposal of such cases** besides **designating one court in each district as a special court** to deal with these cases.

Centre brings ordinance to gain control of services in Delhi

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Centre has brought an Ordinance extending powers to the Delhi lieutenant governor over services in the administration of the national capital – basically, the power to transfer and appoint bureaucrats posted to Delhi.
- The Ordinance, aimed at nullifying the effect of the Supreme Court's decision that gave the Delhi govt powers over administrative services in the national capital, raises several key questions— questions, which are likely to soon be posed before the Supreme Court.

Can a decision of the Supreme Court be undone?

- The Parliament has powers to undo the effect of a judgement of the Court by a legislative act. However, the law cannot simply be contradictory to the Supreme Court judgement, it must address the underlying reasoning of the Court, the defect due to which the Court has given judgement.
- Such a law can be both retrospective or prospective.



Ordinance vs. Supreme Court's judgement

- Two constitution benches of the Supreme Court, in 2018 and on May 5, 2023 have dealt with the issue of the powers of the Delhi government. Both these judgements **involve the interpretation of Article 239AA of the Constitution** that deals with **the governance structure of the national capital**. In 1991, when Article 239 AA was inserted, the Parliament also passed the Government of National Capital Territory of Delhi Act, 1991 to provide a framework for the functioning of the legislative assembly and the government of Delhi.
- The ruling on May 5 places, **three constitutional principles – representative democracy, federalism and accountability – to an elected government** within the interpretation of Article 239AA.
- The judgement also recognises **“principles of democracy and federalism”** to be part of the basic structure of the Constitution.
- Since the basis for the Court's decision is found in interpretation of constitutional provisions, it can be debated whether a law amending the GNCTD Act, 1991 will suffice to nullify the effect of the judgements.
- **Delhi govt can argue that a legislation that nullifies the effect of the ruling must be an amendment to the Constitution and not just an amendment to the statutory law.**
- The Court also clearly held that **Part XIV of the Constitution that contains provisions for regulating the employment of persons to the public services under the union and States is applicable to union territories which includes Delhi.**
- **The current ordinance takes away this power from the Delhi govt and places it with a statutory body that comprises Delhi's CM and the Chief Secretary and principal Home Secretary of the Delhi govt.**

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- This arrangement means that the chief minister can effectively be vetoed by two senior bureaucrats on the issue of appointments and transfers of bureaucrats.
- This dilution of power of the Delhi govt will have to be justified within the Court's interpretation of Article 239 AA.
- While the Ordinance does not address the issue, it will be litigated in Court whether the new statutory authority will impact the court's finding on Delhi's powers.

Ordinance's impact on the basic structure of the Constitution

- The Parliament cannot bring in a law, or even a Constitution amendment, that violates the basic structure of the Constitution.
- In the majority ruling in the 2018, the Constitution bench held that while Delhi could not be accorded the status of a state, the concept of federalism would still be applicable to it.
- On 5 May, the unanimous ruling penned by Chief Justice of India DY Chandrachud also held that with the introduction of Article 239AA the Constitution created a federal model with the Union of India at the Centre, and the NCTD at the regional level.

SC validates Tamil Nadu's stand on Jallikattu



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Jallikattu, the traditional rural sport involving bulls, has received judicial approval. A Constitution Bench of the Supreme Court has ruled that **the amendment made in 2017 by the Tamil Nadu Assembly to the Prevention of Cruelty to Animals Act, 1960, facilitating the smooth conduct of the sport with stringent regulations, is valid.**
- The court has, thus, settled the question whether the sport should be disallowed on the ground that it involves unnecessary cruelty to animals and violates animal rights.
- The verdict is also applicable to **other sports involving bovines such as Kambala (buffalo race) in Karnataka and bullock-cart racing in Maharashtra.**

Controversies over jallikattu

- The main conflict over the sport, which involves **sturdy bulls being let loose into the arena and being chased by men who are considered winners if they manage to hold on to the humps of the animals without being thrown off**, is whether it involves **unnecessary cruelty.**
- Animal rights activists have been arguing that **the manner in which it is held is cruel** because **it inflicts pain and suffering.** What appears to be a bull's ferocity in the arena is **actually a flight response born out of fear.**
- Specific acts that allegedly took place in the past — before the events were regulated by law — **such as beating the bulls or twisting their tails and other acts that inflict pain** so that **they are more ferocious in the arena, are now rare.**
- In 2006, a Madras High Court judge, when a petition for permission to hold a rekla race (a kind of bullock cart race) came up before her, **barred the conduct of any such event including jallikattu.**

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- On appeal, a Division Bench set aside the order, but asked the govt to take steps to prevent any kind of violence or cruelty as well as ensure the safety of the participants and spectators. **It favoured regulation over an outright ban.**
- **The State Assembly adopted the Tamil Nadu Regulation of Jallikattu Act in 2009 to strengthen its case for holding the event by adopting regulations and safety measures.**
- In July 2011, the Union Ministry of Environment and Forests issued **a notification including 'bulls' in a list of animals that are prohibited from being exhibited or trained for any performance.** Efforts to organise the sport **as a regulated event failed** and **jallikattu could not take place for some years.**
- The ban caused **a bitter divide in society** between two camps: **those who believed that jallikattu should be organised without any hindrance** as it was **part of the State's tradition and culture**, and that its continuance was needed **to preserve the native breeds of bulls** on the one hand; and **those who believed it cannot be regulated at all** as it amounted to cruelty and ill-treatment of animals in any form.
- Further, **the number of human casualties** during the events every year also raised concern about **the safety of the participants and spectators.**

Why did SC banned Jallikattu?

- **In a landmark verdict that established a rights jurisprudence for animals under the Constitution, the Supreme Court imposed a ban on jallikattu and similar sports involving animals in 2014.**
- It held the Tamil Nadu law regulating the sport to be **in complete contrast** to the Central legislation on preventing cruelty to animals. It said **the Act was "anthropocentric"** in the sense that **it sought to protect the interests of organisers, spectators and participants and not the animals.**
- On the other hand, **the Prevention of Cruelty to Animals Act, 1960 (PCA) was an "ecocentric" law.** The court cited the **'Five Freedoms'** recognised for animals by the **World Health Organization for Animal Health** — **freedom from hunger, thirst and malnutrition; freedom from fear and distress; freedom from physical and thermal discomfort; freedom from pain, injury and disease; and freedom to express normal patterns of behaviour** and said that these freedoms should be read into the provisions favouring animal rights found in the PCA.

Tamil Nadu's response

- A massive agitation broke out in January 2017 against the government's failure to facilitate the conduct of jallikattu for successive years, with tens of thousands of people, especially youngsters, occupying the sands of the Marina beach in Chennai for days.
- This led to a surge of support for Jallikattu. The govt of then CM O. Panneerselvam agreed to take legislative measures. With the Union govt's cooperation, it obtained the President's prior instruction to issue an ordinance that sought to remove the basis for the 2014 Supreme Court judgment.
- To avoid conflict with the Central law, the ordinance, which was replaced by an Act within a few days, was adopted as a State-specific amendment to the PCA itself.
- It was framed in a way that would define jallikattu as an event organised to promote and follow tradition and culture and to preserve the native breeds of bulls. Its clauses were worded to remove the applicability of the PCA provisions to Jallikattu.
- It added the sport as another exception to the list of acts the PCA itself allows as those that do not amount to cruelty (other exceptions include dehorning, castration and destruction of stray dogs and other animals).
- It made the restriction on use of animals for performances inapplicable to jallikattu, besides including the sport to the list of 'exemptions' from the rule against using some animals as performing animals. With the President giving his assent, the amendment became law in Tamil Nadu.

SC's latest ruling



- In its latest ruling, a Constitution Bench has accepted the basic argument that jallikattu is part of the cultural heritage of Tamils.
- It observed that the judiciary cannot examine the question whether something was part of tradition and culture, and that it would defer to the legislature's view in this regard.
- The court recalled that the 2014 judgment had banned the sport by citing acts that amounted to cruelty then.
- However, the situation was now different, the Constitution Bench said, as the State amendment has been followed up with stringent regulations for conducting jallikattu.



CJI Chandrachud condemns 'forum shopping'



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Chief Justice of India (CJI) DY Chandrachud, recently told a litigant appearing before him that “I will not permit forum shopping”.
- This remark came as the litigant mentioned his case before the CJI, seeking a hearing, although he had mentioned the same case a day before Justice KM Joseph.

What is 'forum shopping'?

- When litigants or lawyers attempt to deliberately move their case to a particular judge or Court where they think the judgment could be more favourable, they are said to be “forum shopping.”
- Webster's's dictionary defines forum shopping as the “practice of choosing the court in which to bring an action from among those courts that could properly exercise jurisdiction based on a determination of which court is likely to provide the most favorable outcome.”
- Lawyers think about which is the right forum to approach as part of their litigation strategy. For e.g., one could directly approach the Supreme Court via a public interest litigation case instead of the concerned High Court because the issue could get more eyeballs.
- However, an obvious effort to circumvent the process or avoid a particular judge is disapproved of!
- Judges have cited the injustice caused to the other party in the case and overburdening some courts over others and interfering with judicial process.

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- Even the US and UK courts have criticised the practice of forum shopping as something to be avoided or prohibited. However, most common law countries use the “forum non-conveniens” principle to prevent forum shopping,
- This principle gives the court discretionary powers to refuse to exercise its jurisdiction over a matter where another court, or forum, may more conveniently hear a case.
- Using this power, the court can dismiss a case in the interests of justice and the parties while allocating it to the appropriate bench.
- The Supreme Court in its 1988 ruling in ‘Chetak Construction Ltd. vs. Om Prakash’ said, “A litigant cannot be permitted choice of the forum,” and that every attempt at forum shopping “must be crushed with a heavy hand.”

Supreme Court's view on forum shopping

- Last year, on March 22, an SC Bench of Justice S. Abdul Nazeer and Justice Krishna Murari in the case of ‘Vijay Kumar Ghai vs. State of W.B.’ termed forum shopping as a “disreputable practise by the courts” that “has no sanction and paramountcy in law”.
- The court observed that despite condemning the practice, one of the respondents had filed three complaints, two in Delhi and one in Calcutta. Observing the timeline of the complaints filed, the court said that it indicated “the malafide intention” of the respondent, which was to harass the petitioners and “pressurise them into shelling out the investment.”
- In the 2022 ruling, the court reiterated that forum shopping has been condemned by courts while referring to its 2017 ruling in ‘Union of India & Ors. vs. Cipla Ltd.’, which laid down a “functional test” to be adopted for forum shopping. “What has to be seen is whether there is any functional similarity in the proceedings between one court and another or whether there is some sort of subterfuge (ploy) on the part of a litigant. It is this functional test that will determine whether a litigant is indulging in forum shopping or not,” the court said.

(more ahead)

- On March 28, the Jammu, Kashmir, and Ladakh High Court in 'Dr. Khair-Un-Nisa and Ors vs. UT of Jammu and Kashmir and Ors' **imposed costs worth one lakh rupees** on the petitioners for indulging in forum shopping by filing multiple petitions before different wings of the court, albeit having the same cause of action.
- Similarly, "**Bench hunting**" refers to **petitioners managing to get their cases heard by a particular judge or court to ensure a favourable order**, the court added. Relying on the 2017 SC ruling in 'Kamini Jaiswal vs. Union of India', the court said that "unscrupulous elements" are always on the hunt to find a court or forum of their choice but are not permitted to do so by law.
- On April 26, 2022, the Jodhpur Bench of the Rajasthan High Court in the case of 'Dhanwantri Institute of Medical Science vs. The State of Rajasthan' **upheld an order** imposing **costs worth 10 lakh rupees** on a party for engaging in forum shopping.
- Going back to July 27, 2017, the Delhi High Court in 'Rosmerta HSRP Ventures Pvt. Ltd. vs. Govt. of NCT of Delhi & Anr.' **imposed costs on a private company** that it found was indulging in forum hunting in an arbitration matter.

Deadlock continues in Telangana-Andhra Pradesh water dispute



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The long-running dispute over the water share of **the Krishna river** between Andhra Pradesh (A.P.) and Telangana remains **unresolved, even nine years after the bifurcation of the combined State.**

Origin of this dispute

- The dispute dates back to **the formation of Andhra Pradesh in Nov, 1956.**
- Before the formation of Andhra Pradesh, **four senior leaders** each from **different regions of Andhra**, including **the Rayalaseema Region** and the **Telangana region**, signed **a Gentlemen's Agreement** on Feb 20, 1956.
- Among others, one of the provisions of the agreement was **the protection of Telangana's interests** and needs with respect to the utilisation of water resources with **equitable distribution** based on **treaties followed globally.**
- Further on, **in 1969, the Bachawat Tribunal (KWDT-I) was constituted** to settle the dispute around water share **among the riparian States of Maharashtra, Karnataka and Andhra Pradesh (before bifurcation).**
- The Tribunal allocated **811 tmcft dependable water** to Andhra Pradesh. The **A.P. govt** later apportioned it in **the 512:299 tmcft ratio** between **Andhra (including parts of Rayalaseema which comprise the Krishna Basin)** and **Telangana, respectively**, based on the **command area developed** or **utilisation mechanism** established by then.

(more ahead)

Cont'd

- The Tribunal had also recommended taking the Tungabhadra Dam (a part of the Krishna Basin) water to the drought-prone Mahabubnagar area of Telangana.
- However, this was not followed through, giving birth to discontent among the people.
- Telangana had time and again reiterated how it had been meted out with injustice in Andhra Pradesh when it came to the matter of distributing water resources.

Water sharing arrangement after the bifurcation



- There is no mention of water shares in the Andhra Pradesh Reorganisation Act, 2014, since the KWDT-I Award, which was still in force, had not made any region-wise allocation.
- At a meeting convened by the then Ministry of Water Resources in 2015, the two States had agreed for sharing water in the 34:66 (Telangana:A.P.) ratio as an ad hoc arrangement with the minutes clearly specifying that it has to be reviewed every year.
- The arrangement in the Act was only for the management of water resources by setting up two Boards, the Krishna River Management Board (KRMB) and the Godavari River Management Board (GRMB).
- The KRMB, however, continued the same ratio year after year in spite of the opposition by Telangana.
- In Oct. 2020, Telangana raised its voice for an equal share, till water shares are finalised.
- Unable to convince the member States, the river Board has referred the matter to the Ministry of Jal Shakti (MoJS).

Claims made by both states

- Telangana has been asking the Centre to finalise water shares from day one of its formation.
- Citing treaties and agreements followed globally in sharing river waters, Telangana has been arguing that as per the basin parameters, it is entitled for at least a 70% share in the allocation of the 811 tmcft.
- Besides, it has been highlighting how A.P. has been diverting about 300 tmcft water to the areas outside the basin from fluoride-affected and drought-prone areas within the basin in Telangana.
- On the other hand, A.P. has also been staking claim for a higher share of water to protect the interests of command areas already developed.

The Centre's stand

- The Centre has convened two meetings of the Apex Council comprising the Union Minister and Chief Ministers of Telangana and A.P. in 2016 and 2020 without making any attempt to deal with the issue.
- Following a suggestion made by the MoJS in 2020, Telangana has withdrawn its petition over the issue in the Supreme Court as the Ministry had assured to refer the matter of water shares to a Tribunal.
- However, the Centre has been sitting over the issue for over two years now even as the two States continue to spar over the matter day in and day out.



India gets a new Parliament building

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- In its **75th year of Independence**, India, the world's biggest democracy, has got a new Parliament building.
- It was inaugurated by **Prime Minister Narendra Modi**.



Why was it needed?

- The existing Parliament House, which was commissioned in 1927, is almost a century old Heritage Grade-I building. It has seen a massive increase in parliamentary activities and users over the decades.
- Ad hoc constructions and modifications have been made over time, and the building is showing signs of distress and over-utilization and is not able to meet the current requirements in terms of space, amenities and technology.

Limitations of the old Parliament building

- **Narrow seating space for MPs:** The present building was never designed to accommodate a bicameral legislature for a full-fledged democracy. The number of Lok Sabha seats is likely to increase significantly from the current 545 after 2026, when the freeze on the total number of seats lifts. The seating arrangements are cramped and cumbersome, with no desks beyond the second row. The Central Hall has seating capacity only for 440 persons. When the Joint Sessions are held, the problem of limited seats amplifies.
- **Distressed infrastructure:** The addition of services like water supply and sewer lines, air conditioning, firefighting equipment, CCTV cameras, etc., have led to seepage of water at several places and impacted the aesthetics of the building. Fire safety is a major concern at the building.
- **Obsolete communication structures:** Communications infrastructure and technology is antiquated in the existing Parliament, and the acoustics of all the halls need improvement.
- **Safety concerns:** The current Parliament building was built when Delhi was in Seismic Zone-II; currently it is in Seismic Zone-IV. This raises structural safety concerns.
- **Inadequate workspace for employees:** Over the years, inner service corridors were converted into offices which resulted in poor-quality workspaces. These workspaces were made even smaller by creating sub-partitions for more workers.

Main features of the new Parliament building

- It has a built-up area of about 65,000 sq m, with its triangular shape ensuring the optimum utilisation of space.
- The new building will house a larger Lok Sabha hall with a capacity of up to 888 seats, and a larger Rajya Sabha hall with a capacity of upto 384 seats. The Lok Sabha may accommodate up to 1,272 seats for joint sessions of Parliament.
- While the Lok Sabha hall is based on the peacock theme, India's national bird, the Rajya Sabha is based on the lotus theme, India's national flower.
- A state of the art Constitutional Hall in the building "symbolically and physically puts the Indian citizens at the heart of our democracy".
- The building will have ultra-modern office spaces equipped with the latest communications technology. It will also have large committee rooms with the latest audio-visual equipment.
- A "Platinum-rated Green Building", the new Sansad Bhavan will embody Indian heritage and India's commitment towards environmental sustainability.
- The new Parliament will be also be divyang friendly, and people with disabilities will be able to move around freely.
- A Central Lounge that will complement the open courtyard will be a place for members to interact with each other. The courtyard will have a banyan, the national tree.

PM Modi releases Rs 75 coin on new Parliament inauguration day



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- To mark the inauguration of the new Parliament building, Prime Minister Narendra Modi released a commemorative coin of Rs 75 denomination.
- India has been issuing commemorative coins since the 1960s for several reasons such as paying homage to notable personalities, spreading awareness about government schemes, or remembering key historic events.



Features of the new coin

- The latest Rs 75 coin is circular in shape with a diameter of 44mm. The composition of the coin is of a quaternary alloy — 50% silver, 40% copper, 5% nickel and 5% zinc.
- The face of the coin bears the Lion Capitol of Ashoka Pillar in the centre, with the legend “सत्यमेव जयते” (Satyameva Jayate) inscribed below.
- On the left periphery is the word “भारत” (Bharat) in Devnagri script and on the right periphery is the word “INDIA” in English.
- The other side of the coin displays an image of the new parliament building. The inscription “Sansad Sankul” is written in Devanagari script on the upper periphery while the words “Parliament Complex” in English on the lower periphery of the coin.

How to get hold of commemorative coins?

- If someone wants to acquire commemorative coins, they can do so by visiting **the website of the Securities of Printing and Minting Corporation of India Limited (SPMCIL)**.
- Most often, such coins are meant to be **just collectables** as their worth **may not necessarily be the same as their face value** — they are partially made of precious metals such as **silver or gold**; as mentioned above, **the latest commemorative coin is 50% silver**.
- For instance, **in 2018**, the govt issued a commemorative coin **of Rs 100 denomination** to honour **former Prime Minister Atal Bihari Vajpayee**. It is currently available on SPMCIL's website for **₹5,717**. This coin is **50% silver**, and has other metals.

Authority to design and mint coins

- The Coinage Act, 2011 gives **the central govt the power to design and mint coins in various denominations**. In the case of coins, the role of the RBI is **limited to the distribution of coins** that are supplied by **the central govt**.
- Though the central govt regularly releases them according to its choice, **it also mints such coins at the request of third parties**.
- In 2017, the govt issued commemorative coins to pay homage to **Indian actor and politician Late MG Ramachandran** and **Carnatic singer MS Subbalakshmi** after receiving requests on this behalf.
- **All coins** are minted in the **four mints owned by the Govt of India** in **Mumbai, Hyderabad, Kolkata and Noida**.
- The country released **its first commemorative coin** in **1964** in honour of **Jawaharlal Nehru**, who had passed away that year.

Code of conduct for civil servants



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Since 2018, **over 10 lakh candidates** have applied **each year** to sit in the **Civil Service Aptitude Test (C-SAT)**. This year, **11.52 lakh candidates applied**, and after three rounds of examinations, **933 were finally selected**.
- While the craze to enter the civil services got **slightly decreased post-liberalisation**, over the past decade it is **well and truly back**.
- Candidates often **spend years** and **lakhs of rupees** in **coaching**, attempting to crack the extremely competitive exam. Of late, several successful candidates have even appeared for the exams **after a few years in the private sector**.
- Today, CSE results attract serious media scrutiny, **with toppers even making national news**.
- However, getting selected is just the beginning of one's life in service – a life which will have several limitations as per law.

Civil Services details

- Successful applicants can join **a number of services** depending on **their rank** and **personal preferences**.
- There are **three All India Services** – the **Indian Administrative Service**, the **Indian Police Service** and the **Indian Forest Service** – which are selected by the **central govt** with officers allotted to **various state cadres**.
- The Centre then gets **a certain percentage of officers** from **each state** on **central deputation**. These bureaucrats **work directly for the Centre**.
- All India Services are governed by **Article 312** of the Constitution of India. Other services are called **Central Civil Services**. These services are **under the central govt itself** with **no state cadre system**.
- They include services such as the **Indian Foreign Service**, the **Indian Revenue Service**, **Customs** and **Central Excise Service** and **several others**.

Two sets of largely overlapping rules

- There are **two sets of rules** for civil servants – one for **All India Services** and the **other for Central Civil Services**. Specially designed **Conduct Rules** govern an officer's behaviour and conduct.
- The AIS Conduct Rules, 1968 and CCS Conduct Rules, 1964 are mostly similar. These were framed based on recommendations from a committee constituted by **then Minister of Home Affairs Lal Bahadur Shastri** in 1962.

Rules, both vague and specific!

- The Conduct Rules cover a wide range of issues, from the vague idea of personal integrity to more specific actions.
- For instance, **Rule 3(1)** states that **“Every member of the Service shall at all times maintain absolute integrity and devotion to duty and shall do nothing which is unbecoming of a member of the Service.”**
- This rule is **purposefully vague** and can be applied to individuals **in cases of any kind of wrongdoing**, even if the allegations are **not covered under any more specific rules**. For e.g., while **promotion of casteism** is **not covered** under any specific Conduct Rules, casteist behaviour can be interpreted as **“unbecoming of a member of the Service”** under Rule 3(1).
- On the other hand, **Rule 4(1) of the AIS Conduct Rules** is **more specific**. It states, **“No member of the Service shall use his position or influence directly or indirectly to secure employment for any member of his family** with any private undertaking or Non-Government Organisation.”

Restrictions on political activities and expressing personal opinions

- As per Rule 5(1) of AIS Rules, no member of the Service shall be a member or be associated with any political party or any such organization that takes part in politics, any political movement or political activity.
- While members can hold personal political beliefs, these rules restrict the degree to which they can act on them.
- Similarly, as per Rule 7 of AIS Rules, no member of the Service shall criticize any policy of the Central govt. or any State govt.
- However, civil servants are allowed to express their opinion on official files and other official documents and can even talk to the media during field postings.
- What they can tell the media, though, is restricted to their job or some specific event/issue. Personal beliefs on wider issues are not to be aired.

The Dowry Factor!

- Often, once selected for the services, Civil servant officers receive numerous marriage offers. Influential families, including big political ones, covet civil servants as husbands for their daughters and are willing to pay a big price to win their hand in marriage.
- A civil servant's job security, status and perks received plays a major role in inflating dowry demands. Notably, civil servants and their families too are willing to receive a big dowry.
- But as far as rules are concerned, both giving and receiving dowry is strictly prohibited under Rule 11 (1-A) of the AIS Rules. In fact, any gift received by a civil servant exceeding the value of Rs. 25,000 needs to be reported.
- This threshold was last fixed in 2015.

Rules amendments and additions



- While Conduct Rules penned in the 1960s are still being followed, these are **never static**, with **updates made from time to time**.
- For instance, with regard to Rule 5(1), the govt, from time to time, determines **whether a particular organisation is political or not**. Interestingly, such clarifications have been repeatedly made about the **Rashtriya Swayamsevak Sangh (RSS)** with rules stating that its activities are political in nature. Notably, while the **RSS itself claims to be non-political**, even **BJP govts at the Centre** have **not changed its categorisation**.
- In 2014, the Narendra Modi govt added a few sub-rules to the Conduct Rules. They called for every member of the service to maintain **high ethical standards, integrity and honesty; political neutrality; accountability and transparency etc.**
- The Modi govt also called for Service members **to maintain integrity, honesty, fairness and impartiality** in public service.
- They are also supposed to **not discriminate against anyone**, particularly the poor and the under-privileged sections of society; **perform and discharge their duties with the highest degree of professionalism and dedication to the best of their abilities**.
- Similarly, when allegations were made that only oral orders were being issued to subordinate officials, **in 1979, the Janata Party govt** added that, **"The direction of the official superior shall ordinarily be in writing. Where the issue of oral direction becomes unavoidable, the official superior shall confirm it in writing immediately thereafter."**
- In **1998**, the **United Front govt** added that **"No member of the Service shall employ to work any child below the age of 14 years."**

Immediate application of rules

- As soon as candidates are allotted a particular service and join training which is part of their probation period, they become members of that service and are thus covered by these rules.
- There are also certain rules which continue to apply post-retirement as well.

Provisions for heavy penalties!

- Transgressions can attract two kinds of penalties — major and minor. Major penalties can include “dismissal” from the service as well.
- Besides these conduct rules, there is also the Prevention of Corruption Act (POCA). However, action on corruption in India is based less on intelligence and more on complaints.
- While anonymous complaints are not entertained, complaints with name and details of complainants too hardly ever reach the proper forum. Fora where such complaints can be made include the Central Vigilance Commission, Lokpal and other investigation agencies.

INTERNATIONAL ORGANISATIONS & BILATERAL RELATIONS

India and UK to jointly create India-UK 'NET Zero' Innovation Virtual Centre



Relevance: Prelims & Mains Paper II; Bilateral Relations

Why in news?

- India and the U.K will together jointly create India-UK "NET Zero" Innovation Virtual Centre.
- This platform will provide a platform to bring stakeholders from both countries together to work in some of the focus areas.
- They include the Decarbonization of manufacturing processes & transport systems and Green Hydrogen as a renewable source.
- Under its net zero efforts, India has already taken various initiatives like India Solar Alliance, Clean energy mission etc.

U.S. and South Korea sign the 'Washington Declaration to counter the North Korean nuke threat

Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- South Korean President Yoon Suk Yeol recently visited the U.S. to commemorate the 70th anniversary of U.S.-South Korea bilateral relations.
- A highlight of the visit was the signing of the "Washington Declaration" as a nuclear deterrence strategy.

Purpose of this visit

- The successful launch of North Korea's Hwasong-8 solid-fuel intercontinental ballistic missile (ICBM), a vital component for nuclear weapons delivery, is believed to have triggered this visit.
- Mr. Yoon aimed to strengthen the strategic partnership, drawing an alliance over an extended nuclear deterrence plan against the regional aggression of North Korea.



What is the Washington Declaration?

- The Washington Declaration outlines cooperation towards deterrence. As per it -
 - An American nuclear ballistic submarine would be deployed in the Korean peninsula
 - A nuclear consultative group would be formed to formulate principles of joint response tactics
 - South Korea would receive Intel from the U.S. regarding nuclear advancements
 - The U.S. will strengthen South Korea's nuclear deterrence capabilities through joint military training programs and an annual intergovernmental simulation.
- The declaration reaffirmed the non-proliferation Treaty implying that South Korea would not venture into the creation of its own independent nuclear capabilities and would instead focus on deterrence measures through an alliance-based approach.
- The declaration also mandates the U.S. President as the only 'sole authority' to use the nuclear arsenal of the U.S. in the event of a nuclear confrontation.
- While the existence of the agreement is based on the security needs of South Korea, the policy clearly shows that the interests of the larger power (U.S.) take priority.

U.S. reluctance to nuclear-armed South Korea!

- South Korea's nuclear development programme supported by former president Park Chung Hee was hindered due to U.S. pressure.
- In the 1990s, the U.S. withdrew 100 nuclear weapons from South Korea as part of their "Strategic Arms Reduction Treaty". The U.S. was hoping to make North Korea unarm itself. It wrongly assumed that it could deter the weapons production of North Korea by extracting South Korea's nuclear capacity.
- 2022 marked a shift in U.S. policy as it is now concerned about the progressing nuclear capacities of North Korea. It now believes that a crisis or conflict on the Korean Peninsula could involve a number of nuclear-armed actors, raising the risk of broader conflict.
- The U.S. also wants to control global nuclear arms production. It has been reluctant to allow South Korea to develop its own nuclear arsenal as it would hinder the continued efforts of controlling nuclear production in the world.
- The assurance that the U.S. and its nuclear weapons would protect its allies by being responsible for maintaining stability in the region aligns with the larger goal of non-proliferation.
- Notably, the U.S. plays a major influence in South Korea's foreign policy objectives, and the latter would rather not disappoint the U.S. as it is its major ally.

The regional response

- China has criticised this agreement by saying, “What the U.S. is doing .. provokes confrontation between camps, undermines the nuclear non-proliferation regime and the strategic interests of other countries.”
- Kim Yo-jong, the sister of the North Korean leader Kim Jong-Un warned that the declaration would, “only result in making peace and security of North-East Asia and the world be exposed to more serious danger.”
- Meanwhile, the South Korean public too has doubts over the U.S. support. As per a recent poll, 71% of South Koreans want to build their own nuclear weapons. With an aggressive North Korea in the neighbourhood, they would prefer their own deterrence.

India to build a harbour for Maldivian Coast Guard



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- Defence Minister Rajnath Singh and his Maldivian counterpart, Mariya Didi earlier this week laid the foundation stone for the Coast Guard 'Ekatha Harbour' at Sifavaru in Uthuru Thila Falhu (UTF) atoll.
- This project is among the biggest Indian grant-in-aid projects in the Maldives.

Importance of this project

- This project marks a major step in the growing defence cooperation between India and Maldives.
- It will strengthen the capability of the Maldivian Coast Guard and facilitate regional humanitarian assistance and disaster relief efforts.
- This naval facility will also help Maldives stop sending vessels abroad for maintenance, thus making the country self-sufficient in this regard.
- It will also boost Maldives' maritime security capabilities. Notably, Maldivian personnel might also be trained as part of this project.

Opposition too!

- Since the announcement of this project in 2021, there have been allegations that it was a cover for the Indian military presence in Maldives.
- This led to an “India Out” campaign in the island nation backed by its opposition leader Abdulla Yameen. Maldives President Ibrahim Solih last year banned anti-India protests as a threat to national security.
- Anti-India campaigners in Maldives had also alleged that Indian troops were stationed in a fast patrol vessel India recently gifted to Maldives Coast Guard, It was commissioned as CGS Huravee earlier this week.
- This claim was refuted by Maldivian Defence Minister Didi who said that the Indian crew was on the ship in Male only for training purposes, and from now onwards, it would have only Maldivian personnel.

Maldives' importance to India



- India has had long-standing ties with the Maldives. In 1988, India helped the Maldives prevented a coup attempt backed by a Sri Lankan militant organisation.
- The strategic location of Maldives in the Indian Ocean makes it an important ally for India especially in terms of defence and security.
- Maldives lies close to India's exclusive economic zone and is in a place from where it can oversee maritime trade in the Indian Ocean region.
- India's ties with the Maldives are also significant, particularly in the backdrop of growing Chinese attempts to expand its influence in the region.

Defence cooperation and other projects

- India gifted a patrol vessel and Dornier aircraft to the Maldives in 2019 and 2020 respectively.
- Besides giving a coastal radar system to Male last year, India also decided to provide 24 vehicles and a naval boat and will build police facilities on 61 islands of the country.
- The countries have also agreed to explore additional avenues for cooperation, including in areas of defence trade, capacity building and joint exercises.
- The handing over of these vessels is **in line with India's vision of Security and Growth for All in the Region (SAGAR)**, which seeks to **increase cooperation with its allies in the Indian Ocean Region.**
- Notably, last August saw **the commencement of Greater Male Connectivity Project (GMCP)**—a \$500 million project financed by **India**. It would comprise a 6.74 km bridge and the causeway link connecting the capital Male with the neighbouring islands.



Arab League reinstates Syria's membership after more than a decade of suspension



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- The Arab League recently voted to reinstate Syria's membership after its suspension more than 10 years ago.
- This move marks the defrosting of relations between Syria and other Arab countries. The decision was taken at a closed-door meeting, attended by foreign ministers from 13 out of 22 member states of the organisation, held in Cairo, Egypt.
- Syria was ousted from the Arab League in 2011 following President Bashar al-Assad's brutal crackdown on pro-democracy protests, which led to the ongoing civil war in the country. The conflict has since killed around half of a million people and displaced about 23 million.
- This ruling, which allows Assad to attend the upcoming Arab League Summit in Saudi Arabia later in May has also called for a resolution of the civil war and the resulting refugee and drug smuggling crises.
- A committee involving Egypt, Saudi Arabia, Lebanon, Jordan and Iraq will soon be created to ensure Syria achieves these goals.
- Notably, this decision doesn't mean all Arab nations have normalised relations with Syria. While countries like the United Arab Emirates have lobbied for Assad's and Syria's rehabilitation, others, including Jordan, Kuwait and Qatar have remained opposed to full normalisation before a conclusive political solution to the Syrian conflict.
- Meanwhile, the U.S. has also criticised this move.

What is the Arab League?

- The Arab League, formally known as the League of Arab States, was established in 1945 with initially just six nations: Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, and Syria.
- Currently, it has 22 member states, who have pledged to cooperate on economic and military affairs, among other issues.
- The League makes decisions on a majority basis, but there is no mechanism to compel members to comply with resolutions.
- It has been criticised for its internal conflicts and collective inaction on important international issues.

Reasons behind Syria's reinstatement

- The Arab League's decision is the result of Assad's diplomatic efforts in this regard. These efforts gained momentum after this February's massive earthquake in Turkey and Syria.
- This quake that killed thousands helped the president rebuild ties, seeking humanitarian aid, with rival Arab countries and gain their support while pushing for an end or ease of sanctions imposed on Syria by the Western nations.
- Assad, who was long shunned in the region, has received a favourable response from several Arab nations like Egypt and Oman. Not just because they wanted to help the earthquake victims but as per experts, these countries have realised they need to end Syria's isolation for the stability of West Asia.
- Moreover, they want some sort of repatriation of refugees back into Syria and a curb on the trade of captagon, a highly addictive amphetamine produced in the country. Saudi Arabia and Jordan are facing a big addiction problem due to Syria's extensive multi-billion-dollar drug industry.
- Another factor behind Syria's rehabilitation is the China-brokered re-establishment of diplomatic relations between Saudi Arabia and its arch enemy, Iran, early this year.
- As per analysts, ease in tensions between these two countries has benefited Syria, which has been reliably supported by Saudi Arabia since the outbreak of the civil war.

Likely future scenario!

- The restoration of Syria's membership of the Arab League is a huge victory for Assad but it remains largely a symbolic one.
- Since Western sanctions against Assad's govt remain in place, Syria's return to the Arab League is not expected to lead to a quick release of reconstruction funds.
- A further normalisation in relations and ease of sanctions can be expected if Syria is successfully able to resolve its civil war and curtail the drug trade.
- Many experts and regional nations like Kuwait and Jordan, however, fear that the Arab League's move will set a dangerous example. As per them, to reinstate Syria in the organisation without holding it accountable for carrying out atrocities such as indiscriminate barrel bombing and poison gas attacks against its civilians sends the wrong message.



China-Canada diplomatic relations sink to a new low



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- Recently, the Canadian govt declared Chinese diplomat Zhao Wei “persona non grata,” (Latin for an unwelcome person) for allegedly targeting a Canadian lawmaker critical of China’s human rights record.
- Hours later, China announced a “reciprocal countermeasure” by asking Jennifer Lynn Lalonde, a top diplomat in the Canadian consulate in Shanghai, to leave the country in the next couple of days.
- Tensions soared with China saying it holds the “right to take further actions in response”, while Canadian Prime Minister Justin Trudeau put out a strongly worded statement, reiterating that Canada will not be intimidated.

What started this feud?

- At the centre of the latest row is a report from the Canadian Security Intelligence Service (CSIS). It is based on an intel document from 2021 which detailed potential threats to opposition lawmaker Michael Chong and his family in Hong Kong over the latter’s criticism of Beijing.
- Citing an anonymous source, a newspaper reported that Chinese consul Zhao Wei was involved in gathering information about Mr. Chong and his family in Hong Kong to target him over his anti-Chinese sentiments and for further sanctions. Wei wanted to “make an example” of Chong and “deter others from taking an anti-PRC position.”
- In 2021, Mr. Chong led legislative efforts in Canada’s House of Commons to declare China’s treatment of Uyghurs and other minorities in Xinjiang as “genocide”. In response, China barred his entry into the country.

Canada's reaction to the report

- After details of the CSIS report were revealed, the Canadian govt was heavily criticised for its inaction against China.
- While Mr. Chong said that he was disappointed to find out about the risk to his family's life from a newspaper, Mr. Trudeau claimed he was not made aware of the intel by the spy agency.
- Internal negotiations followed about the future course of action, seemingly to prepare for any economic repercussions since China is Canada's second-biggest trade partner.
- In early May, Canada declared diplomat Zhao Wei "persona non grata". In Canadian Foreign Affairs Minister's words Canada would "not tolerate any form of foreign interference in our internal affairs." The Minister added that, "diplomats in Canada have been warned that if they engage in this type of behaviour, they will be sent home."
- China responded strongly, warning of retaliatory measures. It termed the move a violation of international law and maintained that China never interferes in other countries' internal affairs.
- Later, a Chinese Foreign Ministry spokesperson urged Canada to stop "unreasonable provocations". Hours later, China issued an order asking Ms. Lalonde to leave the country by May 13.

What strained Canada-China ties?

- Diplomatic ties between China and Canada have been unsteady for the past few years, especially after Canadian police arrested Huawei Technologies executive Meng Wanzhou on charges of fraud in 2018.
- A few days after her arrest, China detained two Canadians on spying charges — a move then called “hostage diplomacy”.
- After years of a stand-off, all three were freed by their respective nations in 2021 after a deal was reached to release Ms. Meng.
- During that period, China suspended imports of canola from Canada, alleging pests in the shipment. The ban was, however, lifted last year amid a global shortage of food in the wake of the Russia-Ukraine war. Since then, the rift has widened.
- Canada alleged that the Chinese govt attempted to interfere in the 2019 and 2021 federal elections — a charge China vehemently denies.
- The two countries are also engaged in a technology battle. While Canada has limited the presence of Chinese firms in its communications infrastructure, China believes the restrictions were imposed without any solid evidence.
- The tension between the leadership was also visible at the G-20 summit in Indonesia last year, when Chinese President Xi Jinping and the Canadian PM exchanged barbs over leaked details of their meeting about Chinese interference in domestic affairs.



The G-7 Hiroshima summit



Relevance: Prelims & Mains Paper II; International Organisations

Why in news?

- Leaders of seven of the world's most powerful democracies have gathered this weekend for the Group of Seven summit in Hiroshima.

What is the G-7 Summit?

- The Group of Seven is an informal group of leading industrialised nations. It consists of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
- This year is Japan's turn to host, but the presidency of G-7 summits revolves among the seven members. Two representatives of the European Union also join.
- As is customary in recent years, leaders from some non-G-7 countries and international organizations will also participate in some sessions. The leaders discuss a wide range of issues, including economic policy, security, climate change, energy and gender.
- The first summit was in 1975, when France hosted what was then a Group of Six meeting to discuss tackling a recession that followed an Arab oil embargo. Canada became the seventh member a year later. Russia joined to form the G-8 in 1998 but was expelled after Moscow's 2014 annexation of Crimea.

Other invitees

- This year, the leaders of Australia, Brazil, Comoros, Cook Islands, India, Indonesia, South Korea and Vietnam are invited, as Japanese PM Fumio Kishida stresses the importance of reaching out to developing countries in the so-called Global South and US allies and partners.
- The invitations to leaders outside the G-7 are meant to extend cooperation to a broader range of countries.
- The G-7 countries' share of global economic activity has shrunk to about 30% from roughly 50% four decades ago.
- Developing economies such as China, India and Brazil have made huge gains. This has raised questions about the G-7's relevance and its role in leading a world economy that's increasingly reliant on growth in less wealthy nations.
- Leaders of the United Nations, the International Energy Agency, the International Monetary Fund, the Organisation for Economic Cooperation and Development, the World Bank, the World Health Organisation and the World Trade Organisation are also invited.

Hiroshima's significance as the venue



- Hiroshima which suffered the world's first atomic attack at the end of World War II is Kishida's hometown. His choice of venue underscores a determination to put nuclear disarmament and non-proliferation at the top of the agenda of this year's summit.
- A path to nuclear disarmament has appeared more difficult with Russia's recent nuclear weapon threats in Ukraine, as well as nuclear and missile development by China and North Korea.
- Japan, which is protected by the US nuclear umbrella, has also faced criticism that its nuclear disarmament pledge is an empty promise.

Top issues

- G-7 leaders are expected to **strongly condemn Russia's war on Ukraine** while pledging **their continuing support for Ukraine**. Notably, **Ukrainian President Volodymyr Zelenskyy** has also arrived in Hiroshima.
- There will also be a focus on Beijing's escalating threats against Taiwan, the **self-governing democratic island Beijing claims as its own**, and **ways to reduce Western democracies' economic and supply chain dependency on China**.
- To address **the rise of Global South nations**, including many former colonies of Western powers with varied views on and ties to Russia and China, the G-7 will offer these countries **more support in health, food security and infrastructure to develop closer ties**.



Pakistan and Iran inaugurate border market



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- In a bid to boost cross-border trade, **Pakistan's Prime Minister Shehbaz Sharif and Iran's President Ebrahim Raisi** recently inaugurated **the first border market** at the **Mand-Pashin crossing point** of the Pakistan-Iran border.
- The top leaders also launched an electricity transmission line, which will provide **some of Pakistan's remote regions with Iranian-generated electricity**.

Details

- This newly inaugurated border market - **the Mand-Pishin Border Sustenance Marketplace**, is **one of the six border markets** to be constructed along the 959 km-long border Pakistan-Iran border. Three Border Markets are now being established at Gabd, Mund & Chedgi in Balochistan.
- These facilities **would enhance cross-border trade, foster economic growth and open up new avenues of opportunity for local businesses**.
- The latest border market, which is located at **Mand town in Pakistan's Balochistan province** and **adjacent to Pishin city in Iran's Sistan-Baluchestan province**, has been set up on 10 acres of land. It is the third border crossing point to be opened along the between both countries.
- Trade through the Mand-Pishin border has a long history with **Mand being a hub for small-scale border business owners** from **across Balochistan**, especially those connected with the food and beverage businesses in Kech and Gwadar districts.
- Mand has several large storage houses, where goods such as food and beverage commodities are imported, stored and then distributed across Balochistan and other provinces of Pakistan.



Strategic significance

- The relationship between Shia-majority Iran and Sunni-dominated Pakistan is far from being steady. The two nations have been at odds with each other, especially since the 1979 Islamic Revolution in Iran that brought Ayatollah Khomeini to power.
- In recent years, the ties between them further deteriorated due to cross-border attacks by Pakistani militants along their shared border.
- Small separatist groups have been behind a long-running insurgency calling for Baluchistan's independence from the central govt in Islamabad. Pakistani anti-Iran militants have also targeted the Iranian border in recent years, increasing the friction between the two countries.
- Despite these differences, the two countries haven't ever completely severed their ties. They now seem to be improving their relationship to deal with common issues such as their respective economic crises — While Iran's finances are diminishing due to tough sanctions imposed by the U.S., Pakistan has failed to deal with inflation.
- Another reason for their new-found closeness could be the normalisation of ties between Saudi Arabia and Iran. For decades, Saudi Arabia had been opposed to strong ties between Pakistan and Iran. However, now that Iran and Saudi Arabia have finally re-established their diplomatic relations, Pakistan can fully cooperate with its neighbour and benefit from it.
- The entry of China as a diplomatic player in West Asia can also be a factor. Both Iran and Pakistan share a strong relationship with China and, therefore, it becomes obligatory for them to remain cordial with each other.

PM Modi attends FIPIC summit in Papua New Guinea



Relevance: Prelims & Mains Paper II; International Organizations

Why in news?

- Prime Minister Narendra Modi recently visited Papua New Guinea's capital Port Moresby to attend **Forum for India-Pacific Islands Cooperation (FIPIC) summit, 2023**. This was the first visit by any Indian prime minister to this country.
- Notably, a video of **Papua New Guinea Prime Minister James Marape** bending down to touch Modi's feet drew a lot of interest.

What is FIPIC?

- The Forum for India–Pacific Islands Cooperation (FIPIC) was launched during **PM Modi's visit to Fiji in Nov. 2014**.
- FIPIC includes **14 island countries** – Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu – that are located in **the Pacific Ocean, to the northeast of Australia**.



The idea behind FIPIC

- Despite their relatively small size and considerable distance from India, many of these islands have large exclusive economic zones (EEZs). EEZs is the distance up to which a coastal nation has jurisdiction over the ocean, including both living and non-living resources.
- It generally goes to 200 nautical miles or 230 miles (around 370 km) beyond a nation's territorial sea.
- India's larger focus is on the Indian Ocean where it has sought to play a major role and protect its strategic and commercial interests.
- The FIPIC initiative thus marks a serious effort to expand India's engagement in the Pacific region as well.
- The references to "developments in the Indo-Pacific region" and a "vision for a free, open and inclusive Indo-Pacific" are believed to be related to China's increasing assertion in the region.
- Based on 2021-22 data, the total annual trade between India and Pacific Island countries is valued at \$570 million, in commodities such as plastics, pharmaceuticals, sugar, mineral fuel and ores. Among them, Papua New Guinea is the biggest trade partner in terms of value.

A timeline of previous FIPIC summits

- FIPIC-I, in 2014, took place at **Suva, Fiji's capital city**. India announced **various development assistance initiatives** and **other cooperation projects** in areas of climate change, trade, economy, telemedicine and tele-education, IT, grants for community development projects, etc.
- At FIPIC-II in 2015 in **Jaipur**, India again announced similar initiatives.
- In 2019, the **India-Pacific Small Island Developing States (PSIDS) Leaders' Meeting** (comprising delegations of 12 out of the 14 Pacific Islands countries) was held in New York on the sidelines of the 74th UN General Assembly.
- The Indian govt then announced an allocation of **\$12 million grant (\$1 million to each PSIDS)** towards implementation of **high-impact developmental projects** in the area of their choice.
- In addition, **a concessional Line of Credit of \$150 million**, which can be availed by the PSIDS **for undertaking solar, renewable energy and climate related projects** based on each country's requirement, was announced.

FIPIC- III

- At this year's FIPIC summit which was **the third to be held**, PM Modi announced **the establishment of a super-specialty cardiology hospital** in **Fiji** whose entire cost will be borne by India.
- India will also provide **sea ambulances and desalination units** to all the 14 Pacific island countries.
- A **Jaipur Foot Camp** like the one conducted in **Fiji** in **2022** where prosthetic limbs were provided free of cost to more than 600 people will be set up in **Papua New Guinea** this year. Starting from 2024, two such camps will be organised every year in the Pacific island countries.

G7 employs “de-risking” strategy against China



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- In a statement issued at the end of the leaders' summit in Hiroshima, Japan, G7 countries said they would build economic resilience for themselves, based on a strategy of “diversifying and deepening partnerships and de-risking, not decoupling”.
- The word “de-risking” was again used in the statement to describe the G7 countries' stance towards China on economic matters.
- Also, during a press conference at the end of the summit, U.S. President Joe Biden said: “We’re not looking to decouple from China. We’re looking to de-risk and diversify our relationship with China.”
- Biden also referred to the incident in Feb. 2023 in which the US Air Force, acting on Biden’s orders, shot down a Chinese-operated white high-altitude balloon over US territorial waters off the coast of South Carolina. China, while agreeing that it was their balloon, denied accusations of spying, said it was only a weather balloon, and criticised the American action.

What is “de-risking”?

- The US State Dept. describes de-risking as “the phenomenon of financial institutions terminating or restricting business relationships with clients or categories of clients to avoid, rather than manage, risk”. Simply put, de-risking is to move business away from areas that are considered risky in terms of the returns they could generate.
- Back in 2016, the World Bank had said that global financial institutions were increasingly terminating or restricting business relationships with smaller local banks in some regions in order to “de-risk”, as it is often perceived that such banks would not be able to pay back loans.
- In the context of China, de-risking can be interpreted as a reduction of the reliance on China in the economic sphere — for the supply of materials or as a market for finished goods — so that potential risks to trade and disruption of supply chains are reduced.

Cont'd

- As per G7 countries, their policy approaches are **not designed to harm China or to foil its economic progress and development**. A growing China that plays by international rules would be of global interest.
- However, they've added that economic resilience requires de-risking and diversifying. "We will take steps, individually and collectively, to invest in our own economic vibrancy. We will reduce excessive dependencies in our critical supply chains."
- 'Decoupling' is used here **as an alternative to an economic boycott**. In 2018, the Trump administration **raised tariffs on China's aluminium and steel exports to improve the balance of trade with China**. This move resulted in **a trade war after China retaliated by imposing tariffs worth hundreds of billions of dollars on US products**.

Previous instances of usage of these terms



- In April, US National Security Adviser Jake Sullivan said : "We are for de-risking, not for decoupling."
- Earlier in March, **European Commission President Ursula von der Leyen** had said in Brussels that EU-China relations are "not black or white — and our response cannot be either. This is why we need to focus on de-risking — not decoupling".
- A week later, she reportedly repeated the same message **directly to the Chinese leadership** on a trip to Beijing with **President Emmanuel Macron of France**.
- And after the first meeting of the India-EU Trade and Technology Council (TTC) on May 16, **India's External Affairs Minister S Jaishankar** spoke of de-risking the economy "in an era of global volatility and uncertainty", **but did not mention China**.

China's reaction

- The lack of clarity about the term has meant it can be interpreted differently by different parties.
- An opinion article published in China's state-run Global Times said, "So far, we haven't seen enough sincerity from Washington toward Beijing in its efforts to 'de-risk but not decouple'. In sectors like manufacturing and information and communications technology, we can still feel the high pressure and even suppression from the US."
- Indeed, the US is working to become self-sufficient in the production of semiconductors, crucial for manufacturing electronics.

PM Modi honoured with the highest civilian award of Papua New Guinea

Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- In a special ceremony at the Government House in Port Moresby, H.E. Sir Bob Dadae, Governor-General of Papua New Guinea (PNG) conferred Prime Minister Shri Narendra Modi with the Grand Companion of the Order of Logohu (GCL).
- This is the highest civilian award of PNG. The recipients of the award are titled "Chief".



Key takeaways from PM Modi's South Pacific visit



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- Prime Minister Narendra Modi recently paid a visit to Papua New Guinea.
- It was highly significant in line with India's efforts of engagement with Pacific Island Countries (PICs) under the Forum for India-Pacific Islands Cooperation (FIPIC).

What are PICs?

- PICs is a cluster of 14 island nations dotting the Southwestern Pacific: the Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Nauru, Niue, Samoa, the Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu, and Vanuatu.
- All these islands are located at the crossroads of strategically important maritime trade corridors.
- Until recently, the South Pacific was considered to be under US influence, managed under the Australia, New Zealand, US (ANZUS) trilateral military alliance.
- But with China's growing influence in the region, and the increasing focus on the Indo-Pacific, India's engagement strategy in the region has evolved.
- Of the 14 PICs, Fiji and Papua New Guinea (PNG) are the ones with the biggest populations and the most influence.
- Traditionally, India's interaction with the PICs has also primarily focussed on these two countries, mainly due to the presence of a large diaspora — about 37% of Fiji's 849,000 population (2009 estimates) is of Indian origin, and about 3,000 Indians live in PNG.
- India's total annual trade with the PICs is around \$300 million.

Fiji – India Relations and PNG- India Relations

- Beginning in 1879, Indian indentured labour was transported to Fiji to work on sugarcane plantations. Some 60,000 Indians were brought to the islands between 1879 and 1916; from the early 20th century, Indian traders and others also started arriving in Fiji.
- Workers' agitations and the efforts of C F Andrews, a friend of Mahatma Gandhi's who visited Fiji in 1915 and 1917, led to the abolition of the indenture system in 1920.
- From 1948 until Fiji's independence in 1970, India had a Commissioner to look after the interests of people of Indian origin; the post was upgraded to that of High Commissioner after independence.
- Fiji's PM Ratu Sir Kamisese Mara visited India in 1971 and PM Indira Gandhi visited Fiji in 1981. Following the 1987 coups in Fiji, the High Commission of India and Indian Cultural Centre were closed in 1990; they reopened in 1999 and 2005 respectively. Fiji established its High Commission in New Delhi in 2004.
- India-Fiji relations have grown steadily during the past few years due to several ongoing initiatives and bilateral visits from both sides.

PNG- India Relations

- PNG-India relations post independence are relatively new.
- The Indian High Commission in Port Moresby, PNG, opened in 1996; diplomatic relations were earlier conducted from Suva, Fiji, or Kuala Lumpur, Malaysia. PNG opened its resident diplomatic mission in New Delhi in 2006.

Act East Policy

- India's engagement with the 14 PICs is part of **its Act East Policy**. A major part of this process is **development assistance under South-South Cooperation**, mainly in the form of **capacity building (training, scholarships, grant-in-aid and loan assistance)** and **community development projects**.
- An initiative launched under the Act East Policy for the PICs is the **Forum for India-Pacific Islands Cooperation (FIPIC)**.
- PM Modi had hosted the **First FIPIC Summit** in **Suva** in 2014 during his historic visit to **Fiji**, with participation of all 14 PICs.
- The **2nd FIPIC Summit** was held in **Jaipur** in **2015**. During the two Summits, India announced **several initiatives** to assist the PICs in their well-being and development.
- Modi attended the **third FIPIC Summit** recently, **hosted jointly with PNG**.

Initiatives under Act East Policy



- The development partnership with the PICs include **community development projects** such as solar electrification, supply of agricultural equipment, computers and LED bulbs for schools, sewing machines, dialysis machines, portable saw mills, boats and pick-up trucks, vehicles, construction of sea walls etc.
- Since all PICs are vulnerable to climate change and rising sea levels, initiatives like **International Solar Alliance (ISA)** and **Coalition for Disaster Resilient Infrastructure (CDRI)** complement India's relationship with PICs.
- Under the CDRI framework, **India**, along with **Australia, the UK** and **Small Island Developing States (SIDS)** launched the **Infrastructure for Resilient Island States (IRIS)** on the sidelines of the COP26 at Glasgow in 2021.
- As part of a project for solar electrification of 2,800 houses in 14 PICs, **70 women solar engineers** called **Solar Mamas** have been trained.
- India has also been providing **Humanitarian Assistance and Disaster Relief (HADR)** to the PICs from time to time.

The China factor

- Lately, China has made forays into the Pacific Islands through economic incentives and has sought to boost its security relationship with the island states.
- Meanwhile, India can become a key player in the Blue Pacific 2050 strategy along with its partners like Australia to boost sustainable growth in the region. It can also help Southern Pacific countries meet their developmental goals and tackle climate change.
- Notably, China's increasing presence in the region has worried the US and has caused alarm in Australia and New Zealand.
- China's development support peaked in 2016, and its loans and grants amounted to 8% of all foreign aid to the area between 2011 and 2017, surpassing the US's 0.3% over the same period.
- Notably, China's trade volume with 10 PICs — the Cook Islands, Fiji, Kiribati, Tonga, PNG, Samoa, the Solomon Islands, Vanuatu, Niue, and Micronesia — increased more than 30 times from 1992 to 2021. China is the biggest trading partner of the Pacific Islands Forum (PIF) after Australia and New Zealand.

ECONOMICS

Sudan war leads to shortages of Gum Arabic, essential for fizzy drinks



Relevance: Prelims; Economics

Why in news?

- Sudan is currently witnessing fierce fighting between the army and a paramilitary force. Apart from the human toll, this conflict has also hurt several business interests.
- Among them is the shortage of gum Arabic, one of the country's most sought-after products. It has led to international consumer goods makers racing to stock up on its supplies.

What is Gum Arabic?

- Gum Arabic is a key ingredient in everything from fizzy drinks to candy and cosmetics. It helps bind together food and drink ingredients.
- While cosmetics and printing manufacturers may be able to use substitutes, there is no alternative to gum Arabic in fizzy drinks, where it prevents ingredients from separating.
- Food and drink companies use a spray-dried powdered version of the gum in their manufacturing process.
- About 70% of the world's supply of Gum Arabic, for which there are few substitutes, comes from the acacia trees in Sudan's Sahel region.



Companies swing into action!

- Worried over Sudan's consistent instability, companies dependent on gum Arabic, such as Coca-Cola and PepsiCo, have long stockpiled supplies. Some are keeping stock that will last from three to six months.
- The duration of this conflict might have direct consequences for finished goods on the shelf. As per an industry expert, the current stockpiles will run out in five-to-six months.

Sudan in turmoil!

- While previous conflicts in Sudan tend to be focused in distant regions such as Darfur, this time, the fighting is taking place in the capital Khartoum. The city has been brought to a standstill.
- This conflict has also paralyzed Sudan's economy and has disrupted basic communications.
- Port Sudan, from where Gum Arabic is shipped has been prioritising civilian evacuations.

April 2023 GST revenue collection highest ever at Rs 1.87 lakh crore



Relevance: Prelims & Mains Paper III; Economics

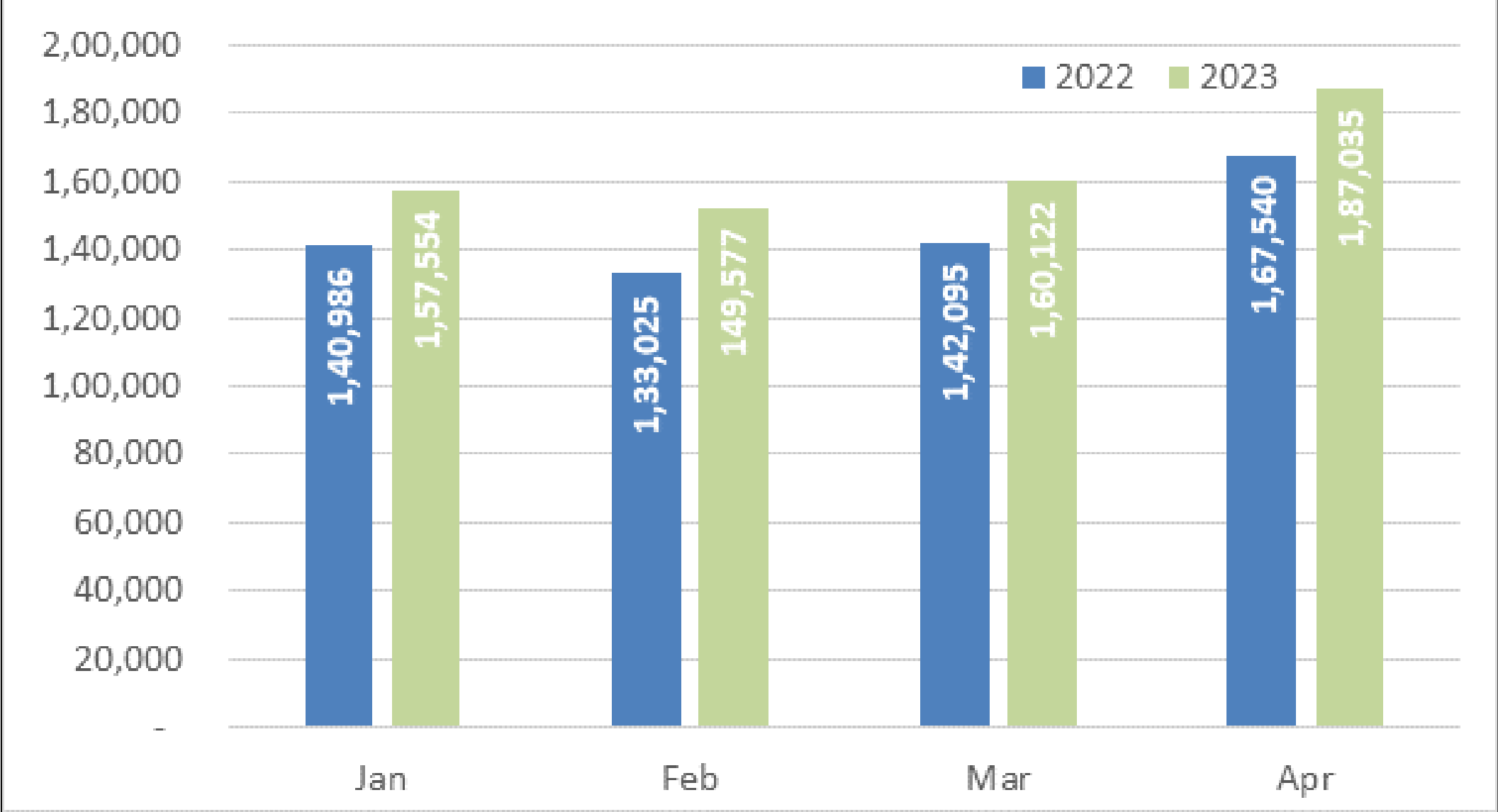
Why in news?

- The gross GST revenue collected in the month of April 2023 is ₹ 1,87,035 crore. Out of this CGST is ₹38,440 crore, SGST is ₹47,412 crore, IGST is ₹89,158 crore (including ₹34,972 crore collected on import of goods) and cess is ₹12,025 crore (including ₹901 crore collected on import of goods).
- The govt has settled ₹45,864 crore to CGST and ₹37,959 crore to SGST from IGST. The total revenue of Centre and the States for April 2023 after regular settlement is ₹84,304 crore for CGST and ₹85,371 crore for the SGST.
- The GST revenues for April 2023 are 12% higher than the April 2022.

A new high

- For the first time gross GST collection has crossed ₹1.75 lakh crore mark.
- April 2023 saw the highest-ever tax collection on a single day on 20th April 2023. On 20th April 2023, ₹ 68,228 crore was paid through 9.8 lakh transactions.
- The highest single-day payment last year (on the same date) was ₹ 57,846 crore through 9.6 lakh transactions.

Trends in GST Collection



JP Morgan to acquire troubled First Republic Bank assets



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- JPMorgan Chase & Co, the biggest U.S. bank, will buy most of First Republic Bank's assets. This comes after the U.S. regulators seized the First Republic.
- The failure of First Republic, which had first-quarter outflows of more than \$100 billion, marks the failure of a third major U.S. bank in just two months, after Silicon Valley Bank and Signature Bank.

First Republic's growth

- First Republic was founded in 1985 by James "Jim" Herbert, son of a community banker in Ohio. First Republic focused early on providing big loans at cheap rates.
- Though Merrill Lynch acquired First Republic in 2007, the latter got listed on the stock market again in 2010 after being sold by Merrill's new owner, Bank of America.
- First Republic's business model was to lure high net-worth customers with preferential rates on mortgages and loans.
- It also catered to schools and non-profits that accounted for 22% of its business loans.
- In Jan., First Republic shareholders' returns were compounded at 19.5% annually, more than double its peers. Its median single-family home loan borrower had access to cash of \$685,000, significantly more than the average American.
- However, its strategy made it more vulnerable than regional lenders with less-affluent customers, since U.S. deposit insurance only guarantees \$250,000 per savings account. First Republic had a high level of uninsured deposits.
- Its loan book and investment portfolio also became less valuable as the U.S. Federal Reserve bank raised interest rates

The downfall

- First Republic started amassing paper losses (a loss in the value of an investment) last year when the Fed began hiking U.S. interest rates to fight inflation. This move also hampered First Republic's chances of a capital raise.
- Gross unrealized losses in held-to-maturity investment portfolio, mainly govt-backed debt, ballooned to \$4.8 billion at the end of Dec. from just \$53 million a year earlier.

Implications of the JPMorgan deal

- Under the aforesaid deal, 84 of First Republic's offices in eight U.S. states would reopen as branches of JPMorgan Chase Bank.
- The acquirement of First Republic's assets will make JP Morgan even bigger. The latter will pay \$10.6 billion to the U.S. Federal Deposit Insurance Corp (FDIC) as part of the deal.

De-dollarization, the bid to attain the status of global reserve currency



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- Several countries have lately increased their de-dollarization efforts.
- De-dollarization refers to the replacement of the U.S. dollar by other currencies as the global reserve currency.
- A reserve currency refers to any currency that is widely used in cross-border transactions and is commonly held as reserves by central banks.

Efforts in this regard

- Countries have tried to overthrow the dollar as the global reserve currency for many decades now for various reasons. But of late, attempts to de-dollarize have picked up pace in the aftermath of Russia's invasion of Ukraine last year.
- The U.S. imposed several sanctions that restricted the use of the U.S. dollar to purchase oil and other goods from Russia. This has been seen by many countries as an attempt to weaponize the dollar.
- Since international transactions carried out in the U.S. dollar are cleared by American banks, this gives the U.S. govt significant power to oversee and control these transactions.
- Currently, the Chinese yuan is seen as the primary alternative to the U.S. dollar owing to China's rising economic power.

The reserve currency advantage

- Other currencies such as the British pound and the French franc have served as international reserve currencies in the past.
- Notably, it is the currencies of economic superpowers that have usually ended up being used as the global reserve currency.
- As the economic influence of these countries decreased, their currencies faced a similar downfall. The British pound was gradually replaced by the U.S. dollar as Britain lost its status as a global economic superpower in the first half of the 20th century.
- As per the critics of the U.S. dollar, the global reserve currency status gives it unfair privileges over other countries, thus justifying de-dollarization attempts by many countries.
- It should be noted that when a country's fiat currency (currency that is not backed by a commodity, such as gold or silver) enjoys reserve currency status, it gives the country the power to purchase goods and other assets from the rest of the world by simply creating fresh currency out of thin air.
- However, such irresponsible expansion of the money supply can cause the degradation of the currency and eventually threaten its status as a reserve currency.
- As long as the U.S. does not degrade its currency at a faster pace than other countries, the dollar may manage to hold its value against other currencies and hence its reserve currency status may not come under serious threat.

The popularity of the U.S. dollar

- As per many economists, the U.S. dollar is widely used in international transactions **because people actually prefer to use American currency over others for various economic reasons.**
- Other currencies that have tried to compete against the U.S. dollar are **not as popular as the dollar for carrying out international transactions.** For e.g., a recent attempt by India and Russia to carry out trade between the two countries in Indian rupees rather than in U.S. dollars has hit a roadblock because the value of India's imports from Russia far outweighs its exports to the country.
- This left **Russia with excess rupees in hand which it was unwilling to spend on Indian goods or assets,** and **led to Russian demands for the settlement of bilateral trade in U.S. dollars.**
- The global acceptability of the U.S. dollar has primarily been **due to the popularity of U.S. assets among investors.** It should be noted that the U.S. has been running **a persistent trade deficit for decades now.**
- The excess dollars that the rest of the world accumulates through this deficit **has been invested in U.S. assets such as in debt securities issued by the US govt.**
- The high level of trust that global investors have in the U.S. financial markets, primarily because of the 'rule of law' in the U.S., is considered to be a major reason why investors prefer to invest in U.S. assets.

RBI's gold reserves approach 800-ton mark



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- The Reserve Bank of India's (RBI) gold reserves **touched 794.64 metric tonnes in fiscal 2023**.
- This is **an increase of nearly 5% over fiscal 2022**, when it held 760.42 metric tonnes of gold.

Details

- **The RBI bought 34.22 tonnes of gold in fiscal 2023**; in fiscal 2022, it had accumulated 65.11 tonnes of gold. Between the fiscal year ended June 30, 2019 (the RBI used to follow the July-June accounting year then; this was changed to April-March starting 2020-21) and fiscal 2023, **the RBI's gold reserves increased by 228.41 tonnes**.
- The 794.64 tonnes of gold reserves in fiscal 2023 also included **gold deposits of 56.32 tonnes**.
- **437.22 tonnes of gold is held overseas in safe custody with the Bank of England and the Bank of International Settlements (BIS), and 301.10 tonnes of gold is held domestically**.
- As on March 31, 2023, the country's **total foreign exchange reserves stood at \$578.449 billion**, and **gold reserves** were pegged at **\$45.2 billion**.
- In value terms (USD), the **share of gold in the total foreign exchange reserves increased from about 7% at the end of March 2022 to about 7.81% at the end of March 2023**.

Reasons behind rising purchase

- As per experts, the RBI has been stepping up its gold purchases over the last few years **in order to diversify its overall reserves.**
- This change in strategy has been driven by **negative interest rates in the past, the weakening of the dollar and growing geopolitical uncertainty.**
- Central banks **want security, safety, liquidity, and return. Gold is a safe asset to have** as it is liquid, has an international price which is transparent, and as it can be traded anytime.
- The RBI which added 7 tonnes of gold in Jan-March 2023 is **among the top five central banks that are buying gold.**

Other central banks doing the same

- Many other central banks, including **the Monetary Authority of Singapore (MAS), the People's Bank of China (PBoC) and the Central Bank of the Republic of Turkey have also been buying gold.**
- Notably, Central banks have been purchasing gold **since they became net purchasers on an annual basis in 2010.** The two key drivers of central banks' decisions to hold gold are **its performance during times of crisis, and its role as a long-term store of value.**
- In late 2022, the PBoC announced total gold purchases of 62 tonnes, lifting its total gold reserves to over 2,000 tonnes for the first time.
- The official gold reserves of the Central Bank of Turkey swelled by 148 tonnes to 542 tonnes in 2022.
- The central banks from the Middle East, **including Egypt, Qatar, Iraq, the UAE, and Oman** also significantly boosted their gold reserves last year.
- In the calendar year 2022, **central banks around the world purchased 1,136 tonnes of gold, which was a record high.**
- In Jan-March 2023, **the Monetary Authority of Singapore was the largest single buyer of gold after it added 69 tonnes to its gold reserves.**

GoFirst's insolvency filing brings India's aviation industry's troubles to the fore

Relevance: Prelims & Mains Paper III; Economics



Why in news?

- After the recent insolvency filing of the low-cost carrier GoFirst, the aviation safety regulator Directorate General of Civil Aviation (DGCA) has directed the airline to stop selling air tickets immediately.
- The DGCA issued GoFirst a show-cause notice for its “failure to continue the operation of the service in a safe, efficient and reliable manner”, giving it 15 days to reply before the regulator decides on revoking the airline’s permit to offer commercial flights.
- The unprecedented distress call by the airline raises concerns about the health of the Indian aviation industry already reeling from pandemic losses.

Size of the Indian aviation sector

- India's domestic air traffic has been recovering in the past few months after being severely hit by the coronavirus pandemic.
- In March, domestic carriers flew 13 million passengers, which was 11% more than the same month in the pre-pandemic years of 2018 and 2019.
- As per the Civil Aviation Ministry, India will have more than 140 million passengers in FY2024 alone.
- The CAPA-Centre for Aviation projects India to handle over 1.3 billion passengers annually in the next 20 years.
- There are currently 148 airports in the country and it is the third-largest domestic market in the world in terms of seat capacity.
- As of March 2023, IndiGo remained the domestic market leader with 56.8% of the market share, followed by Vistara (8.9%) and Air India (8.8%). AirAsia had 7.6% of the market, while GoFirst was at 6.9%, followed by SpiceJet at 6.4%. The newest player AkasaAir, which began operating in Aug 2022, has a 3.3% share.

Financial viability

- Despite being touted as **the 'fastest growing aviation sector' in the world**, airlines in India have struggled to survive in the highly competitive and challenging aviation industry.
- While India's airlines **cumulatively suffered huge losses (₹15,000 crore) in the financial year 2020-2021** owing to the pandemic, losses are not a post-Covid phenomenon.
- In 2019-20, IndiGo was the only airline to make a profit, while all other players posted losses led by then state-run Air India at **₹4,600 crore**.
- Financial trouble has led to **seventeen airlines - domestic and regional, exiting the market** in the past few decades .
- Meanwhile, **the consolidation of four carriers including Air India and Vistara under one umbrella by the Tatas** is going to **make it even tougher for smaller airlines to capture the market**.
- While AirIndia was bad for competition in its earlier state-owned version, with the current consolidation, **75-80% of the market will be captured by Indigo and Air India combined**, leaving just about 20% for players like SpiceJet, GoFirst (if it revives), and Akasa.

Costs borne by the airlines

- Aviation policy in India **is dealt with by the Ministry of Civil Aviation** under the legal framework of **the Aircraft Act 1934, and Aircraft Rules 1937**.
- The DGCA is the statutory regulatory authority that comes in for issues related to **safety, licensing, airworthiness, and so on**.
- While the Indian aviation sector initially saw a boom in the 1990s after opening up as a result of liberalisation reforms and the breaking of the monopoly created by Indian Airlines and Air India, by the early 2000s, **only two major airlines that were given licences (Jet Airways and Sahara) survived**.
- Low-cost carriers which entered the market around 2003 **faced intense competition to keep prices low**, the govt levied **high taxes on Aviation Turbine Fuel (ATF)**.

(more ahead)

Cont'd

- While India's airfares are 15% below the break-even point, heavily-taxed ATF contributes to the single biggest expenses of carriers, amounting to anywhere between 40-50% of operational expenses.
- Some Indian States impose as much as 30% tax on jet fuel. This also makes shorter flight routes unsustainable for smaller airlines.
- About 80% of India's total commercial fleet is leased. Leasing ends up adding high costs to operations. Airlines have to pay annual lease rents of about ₹10,000 crores to lessors, making up nearly 15% of the revenues of Indian Airlines, except Air India which owns a large part of its fleet.
- The costs of these leases go up further when the Indian rupee depreciates. An oil price rise simultaneously increases the cost of ATF, and thus the carrier's expenses.
- Airlines also have to bear costs in terms of airport fees for using airport facilities including aircraft landing, freight etc. Then there are also high costs associated with the training of airline crew.

GoFirst's troubles

- Recent months saw several aircraft grounded at airports, frequent mid-air snags, and cancellations due to operational reasons.
- GoFirst, which recently filed for bankruptcy had 28 of its 54 aircraft grounded. It cited the serial failure of Pratt & Whitney's engines for this leading to a loss of over ₹10,000 crore.
- Pratt & Whitney meanwhile, has disputed this claim saying GoFirst has a "lengthy history of missing its financial obligations".
- GoFirst's total dues to its various creditors now amount to ₹11,463 crores.
- Presently, SpiceJet's aircraft in operation are also down to about 47-50 out of a total fleet of 78-80 aircraft. Lessors have already taken back 20 of its aircraft owing to non-payment of dues.

RBI asks financial regulators to make the transition from LIBOR



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- The RBI, recently stated that some banks and financial institutions were yet to facilitate an absolute transition away from the London Interbank Offered Rate (LIBOR) benchmark.
- They had not inserted fallback clauses into all their financial contracts that reference U.S.\$ LIBOR or the corresponding domestic Mumbai Interbank Forward Outright Rate (MIFOR).
- Notably, both LIBOR and MIFOR would cease to be a representative benchmark from June 30 this year.

What is LIBOR?

- LIBOR is a global benchmark interest rate that combines individual rates at which banks opine they may borrow from each other (for a particular period of time) at the London interbank market.
- It is used as a benchmark to settle interest rates globally. For instance, consumer lending products including mortgages, credit cards and student loans, among others, use it as a benchmark rate.
- Every business day before 11 a.m. (London time), banks on the LIBOR panel make their submissions to news and financial data company, Thomson Reuters.
- The panel consists of commercial bankers such as J.P. Morgan Chase (London branch), Lloyds Bank, Bank of America (London branch), Royal Bank of Canada and UBS AG, among others.
- Following the submission, the contributed rates are ranked. Extreme quartiles, on the top and bottom, are excluded and the middle quartiles are averaged to derive the LIBOR. The idea is to be as close to the median as possible.

A controversy around it!

- The central flaw in the mechanism was that it relied heavily on banks to be honest with their reporting disregarding their commercial interests. It must be noted that the rates were made public.
- The phenomenon was particularly on display during the 2008 financial crisis when submissions were artificially lowered (amid the crisis).
- In 2012, Barclays admitted to the misconduct and agreed to pay \$160 million in penalties to the U.S. Dept of Justice.
- The Wall Street Journal too had studied in May 2008 that several panelists were paying “significantly lower borrowing costs” than what other market measures were suggesting.

Alternatives



- In 2017, the U.S. Federal Reserve announced the Secured Overnight Financing Rate (SOFR) as a preferred alternative to LIBOR.
- Accordingly, in India, new transactions were to be undertaken using the SOFR and the Modified Mumbai Interbank Forward Outright Rate (MMIFOR), replacing MIFOR.
- As stated by the International Finance Corporation (IFC), it is based on observable repo rates, or the cost of borrowing cash overnight, which is collateralised by U.S. Treasury securities.
- Thus, making it a prevailing transaction-based rate and drifting away from the requirement of an expertise judgement as in LIBOR. This would make it potentially less prone to market manipulation.

Response to the regime change

- The RBI had stated in its Nov. 2020 bulletin that, in India, **exposures to LIBOR** are from loan contracts linked to it and Foreign Currency Non-Resident Accounts (FCNR-B) deposits with floating rates of interest.
- In August the same year, the banking regulator had asked **banks to assess their LIBOR exposures** and **prepare for the adoption of alternative references rates**. Contracts entered after (or before, if possible) Dec. 31, 2021, were not to use the LIBOR as reference rate.
- More importantly, **contracts entered before the date were to have fallback clauses**, that is, an agreement for revised considerations when the reference rate is no more published — important for transparency and consistency.



US debt ceiling deal issue forces Biden to pull out of Quad summit



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- The US govt is dangerously close to being unable to make payments on the country's debt.
- While it is up to the US Congress to vote to increase the nation's borrowing cap, Republicans, who control the US House of Representatives, are in a standoff with President Joe Biden. They are insisting to tie any increase to the debt limit to spending caps and other policy demands.
- Meanwhile, US Treasury Secretary Janet Yellen has sounded off alarm bells, warning that the country could default on its debt obligations as early as June 1 if an agreement is not reached.
- Biden was previously supposed to attend the Quad summit – alongside Japan's Fumio Kishida, Australia's Anthony Albanese, and India's Narendra Modi – in Sydney next week, but has cancelled his trip because of debt ceiling negotiations in Washington.

What is the debt ceiling?

- Simply put, the “debt ceiling” or “debt limit” is the maximum amount of debt the federal govt is allowed to accumulate in order to fulfil its financial obligations.
- The govt typically spends more than it earns. This means that it needs to borrow in order to pay for things like social security, Medicare, military and other salaries, interest on the national debt, tax refunds, etc.
- The debt limit was introduced in 1917 – when the US entered World War I – and according to the US Treasury Department, the Congress has increased or suspended the debt limit 78 times since 1960. As of 2023, the debt ceiling stands at \$ 31.4 trillion.

Reasons behind the debt ceiling crisis

- Constitutionally, the Congress controls the govt's purse strings. The debt ceiling was introduced in order to make it easier for the executive to operate without having to turn to the Congress every time it wants to spend – it allowed the govt to borrow as required as long as it kept under the debt limit, which has to be approved by the Congress.
- This makes the debt limit a prime issue in the evergoing push-and-pull between the executive and the legislature. This is further aggravated in a highly polarised political climate in the US where the executive and the legislature are not ideologically aligned.
- On one hand is Democratic President Joe Biden who would want to raise the debt ceiling in order to fulfil the many (expensive) promises he made during his campaign. On the other hand, are Republicans who hold a majority in the House of Representatives. Not only are they ideologically fiscal conservatives, not raising the debt ceiling (not raising it as much as Biden wants), gives them political benefits of wrecking the president's agenda.
- Furthermore, given the dire consequences of not raising the debt ceiling, Republican lawmakers have also attached unnecessary priorities to the bill. For instance, current Republican proposals to increase the debt limit include major spending curbs on the govt.

Consequences of a breach

- If the debt ceiling is breached, the Treasury Department would be unable to make payments when they are due – meaning that the US would enter into a default for the first time in its history.
- Once the debt default happens, analysts say that the dollar would weaken, the stock markets would collapse, and thousands of people might lose their jobs. Simply put, a default is likely to be catastrophic for the global economy – exactly why Republicans are using it as a bargaining tool against Biden.
- Furthermore, any default would also downgrade the US's credit rating – meaning investors would “demand much higher interest rates in the future to loan money to the govt”.

A similar crisis in the past

- According to experts, **today's crisis is similar to what happened in 2011 when Barack Obama (Democrat) was president but the House of Representatives was controlled by Republicans.**
- Back then, the crisis **ended just hours before the deadline**, only after the Obama administration **agreed to spending cuts worth more than \$ 900 billion.**
- This time, Biden faces a similar challenge and with the political divide deeper than ever before, observers see **the fight going down to the wire.**

Alternative to this system

- Most experts agree the current debt limit process isn't working. As per one, there must be a system **where Congress agrees to increase the debt limit every time it passes legislation.**
- Others have suggested **abolishing the debt limit entirely.** They argue that the debt ceiling has **not had a disciplinary effect on the budget.**
- As per them, while cutting spending is understandable in theory, the current system **does not allow meaningful and deliberative discussion on key issues.**



RBI announces withdrawal of Rs 2,000 notes from circulation



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- The Reserve Bank of India (RBI) has decided to withdraw the Rs 2000 denomination banknotes from circulation. However, **existing notes will continue to be legal tender.**
- Members of the public can continue to use Rs 2000 banknotes **for their transactions** and **also receive them in payment.**
- RBI has advised the public to deposit Rs 2000 banknotes, which were introduced **after Rs 500 and Rs 1000 notes were withdrawn** during **the demonetisation exercise six years ago**, into their bank accounts. They can **also exchange them into banknotes of other denominations** at any bank branch **on or before Sept 30, 2023.**
- The facility for exchange will also be available **until Sept. 30** at **19 RBI Regional Offices** that have **Issue Departments.**
- The RBI has **not clarified the status** of these notes **after Sept. 30.** However, its instructions on the Rs 2000 notes **will be effective until that date.**

Reasons behind this move

- The Rs 2000 note was introduced **in Nov. 2016 under Section 24(1) of The RBI Act, 1934**, primarily with **the objective of meeting the currency requirement of the economy quickly after the legal tender status of Rs 500 and Rs 1000 notes was withdrawn.**
- With the **fulfilment of that objective**, and once notes of other denominations were **available in adequate quantities**, the printing of Rs 2000 notes **was stopped in 2018-19.**
- The RBI issued **the majority** of the Rs 2000 denomination notes **prior to March 2017**; these notes are **now at the end of their estimated lifespan of 4-5 years.** This denomination is **no longer commonly used for transactions**; besides, there is **adequate stock of banknotes in other denominations** to meet currency requirements.
- In view of the above, and in line with **its 'Clean Note Policy'** the RBI has decided to withdraw the Rs 2000 banknotes from circulation.

The Clean Note Policy

- The Clean Note Policy seeks to give the public **good-quality currency notes and coins with better security features**, while **soiled notes are withdrawn out of circulation**. The RBI had earlier decided to withdraw from circulation **all banknotes issued prior to 2005** as they have **fewer security features** as compared to banknotes **printed after 2005**.
- However, **the notes issued before 2005 continue to be legal tender**. They have only been withdrawn from circulation **in conformity with the standard international practice of not having notes of multiple series in circulation at the same time**.

Limits on exchange or deposit

- One can exchange Rs 2000 banknotes **up to a limit of Rs 20,000 at a time**. There is **no need to go to one's own bank**. A non-account holder of bank also can exchange Rs 2000 banknotes up to a limit of Rs 20,000 at a time **at any bank branch**.
- The exchange of these notes can also be made **through business correspondents** up to a limit of **Rs 4000 per day for an account holder**.
- Deposits into bank accounts can be made without restrictions “subject to compliance with extant Know Your Customer (KYC) norms and other applicable statutory / regulatory requirements”.
- To give time to banks to prepare, RBI has asked **people to approach branches or Regional Offices of RBI from May 23** to exchange their notes.
- Technically, a person can seek **multiple exchanges in packets of Rs 20,000 at a time**.
- However, this is expected to **attract the attention of enforcement agencies and the Income-tax Department**. Those holding large sums of money in Rs 2000 notes are **likely to find it difficult to exchange their money**.

A repeat of the 2016 demonetisation chaos!

- It is unlikely that bank branches will witness chaos and long queues like in 2016 this time. The printing of Rs 2000 notes was stopped in 2018-19, and they are no longer commonly seen with the public — unlike the abundant Rs 500 and Rs 1000 notes in 2016.
- Also, the decision to withdraw Rs 500 and Rs 1000 notes was announced suddenly, taking the public by surprise.
- The exchange Rs 2000 notes will begin only on May 23, so banks and the public have sufficient time.

Current value of Rs 2000 notes in circulation

- About 89% of the Rs 2000 denomination banknotes were issued prior to March 2017, and are at the end of their estimated 4-5-year lifespan.
- The total value of these banknotes in circulation has declined from Rs 6.73 lakh crore at its peak as on March 31, 2018 (37.3% of notes in circulation) to Rs 3.62 lakh crore, constituting only 10.8% of notes in circulation on March 31, 2023.



ONDC on the path to revolutionizing India's digital commerce ecosystem



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- After the revolution brought in the realm of digital payments by the **Unified Payments Interface (UPI)**, the **Open Network for Digital Commerce (ONDC)** is set to break new ground in the country's digital commerce ecosystem.
- ONDC employs cutting-edge digital infrastructure, seeking to democratise digital commerce in India and make it more accessible and inclusive. **More than 29,000 sellers are live on the network, and alpha tests are currently running in 236 cities.**
- Its backers expect that **over the next five years, ONDC, with its network-centric approach and inclusive governance framework, will transform the digital commerce landscape in India and serve as an important reference point for a forward-looking Digital Public Infrastructure (DPI) governance framework.**

What is ONDC?

- **ONDC is an interoperable network based on the BeckN protocol** that can be used by anyone. It seeks to create a unified vision in **digital commerce** by **enabling both big and small platforms to connect and operate seamlessly on it.**
- It comprises different entities called '**Network Participants**', including **Buyer Applications, Seller Applications, and Gateways** that perform the **search and discovery function.**
- Imagine a scenario where all the large e-commerce platforms, **from food delivery to clothing and fashion to conveyance, are accessible in one place, along with your neighbourhood start-ups, shops, and kirana stores.**

Significance

- By moving the exchange of goods and services from a platform-centric approach to a network-centric approach, ONDC eliminates the need for buyers and sellers to use the same application, and promotes the discoverability of local digital stores across industries.
- This model shift from “store of value” to “flow of value” brings with it several benefits.
- From the buyer’s perspective, ONDC offers greater freedom of choice, reducing the overwhelming reliance on a single platform.
- Sellers also stand to benefit greatly: the network-centric approach of ONDC reduces the skewed bargaining power in favour of the platforms, which often results in higher entry barriers and lower margins for sellers.
- For instance, if a seller wanted to be on multiple platforms, they would have to maintain a separate infrastructure for each, increasing the cost and limiting participation. ONDC’s network-centric approach levels the playing field by making goods and services equitably accessible to all and benefiting all participants in the ecosystem.

Inclusive governance approach



- The ONDC entity, a not-for-profit company incorporated under Section 8 of the Companies Act 2013, manages and operates the ONDC Network.
- It is responsible for building and maintaining the underlying infrastructure (common registries and protocols) as well as defining the rules of engagement and code of conduct for the Network Participants through the ONDC Network Policy and the ONDC Network Participant Agreement.
- Moving a step forward from previous Digital Public Infrastructure (DPI) governance models such as those of Aadhaar and UPI, ONDC takes a more representative and multistakeholder approach to the governance that prioritises the evolving needs of its users.

Funding for ONDC

- The ONDC entity was initially promoted by the Quality Council of India and Protean e-Gov Technologies Ltd. in Dec. 2021, and has since raised more than Rs 180 crore from multiple investors including private and public sector banks, depositories, development banks, and other financial institutions.
- While initial funding was obtained through share allotments, the ONDC entity aims to develop a self-sustaining financial model in the future.
- One potential revenue stream could include charging a small fee from platforms to fund ongoing and expansion-related activities independently. This approach draws on lessons learned from the limitations of UPI, which was heavily reliant on govt subsidies as a revenue stream.

Govt's involvement in ONDC

- ONDC has been endorsed by the Department for Promotion of Industry and Internal Trade (DPIIT) under the Union Ministry of Commerce and Industry. Though DPIIT is not involved in ONDC's funding, it provides support to this network.
- To ensure a market+community driven approach to decision-making, the board includes representatives from banks, the govt, and independent industry and civil society members.
- It will establish a User Council, comprising representatives from Network Participants and civil society. The User Council will provide regular guidance on various aspects of the network's functioning and governance, serving as a liaison between Network Participants, Consumers, and the network.

Severe backlash forces govt to back down a bit on its move to tax all overseas spends

Relevance: Prelims & Mains Paper III; Economics

Why in news?

- A proposal in the Union Budget to levy a higher tax on some types of remittances of funds abroad came into the limelight again this week after a notification was issued for its implementation from July 1.
- Widespread outcry from taxpayers first compelled the govt to issue an explainer on the rationale for the tax levy. By the end of the week, the Finance Ministry had made a partial U-turn to avoid criticism.

Origins of these changes

- In the Budget for 2023-24 presented on Feb. 1, Finance Minister Nirmala Sitharaman proposed to raise the tax collection at source (TCS) rate on overseas tour packages as well as foreign remittances under the Liberalised Remittance Scheme (LRS).
- Indians are allowed to remit up to \$2.5 lakh a year abroad under the LRS. For overseas tour packages, the TCS rate was to be raised from 5% to 20%.
- Similarly, a 20% tax was proposed for all remittances under the LRS, as opposed to the continuing treatment — a 5% TCS on remittances over ₹7 lakh. This did not cover remittances made for education or medical expenses abroad, which are permitted up to ₹7 lakh each annually, and already attracted a 5% TCS.
- On March 24, while introducing changes to the Finance Act of 2023, Ms. Sitharaman sought to tighten this proposal further. “It has been represented that payments for foreign tours through credit cards are not being captured under the LRS and such payments escape TCS.
- She also requested the RBI to look into this with a view to bring credit card payments for foreign tours within the range of LRS and tax collection on source.

The notifications

- On May 16, the Finance Ministry notified the **Foreign Exchange Management (Current Account Transactions) (Amendment) Rules, 2023**, to bring all credit card spends abroad under the remit of the LRS.
- The new notification, drafted in consultation with the RBI, **omitted Rule 7 of the Foreign Exchange Management (Current Account Transactions) Rules, 2000**, which had kept credit cards out of the \$2.5 lakh annual LRS limit as a liberalisation measure.
- These changes **enabled the levy of a higher TCS on credit card spends overseas from July 1 this year**, and the govt gave an assurance that this will not impact purchases of foreign services like newspaper or streaming services subscriptions while being in India.

Invited major criticism!

- The 20% TCS levy on credit card spends abroad would mean **any such expenses made abroad, barring for education and healthcare**, leading to **additional funds of the taxpayer being blocked** which they could either adjust against any advance tax payments or await refunds from their income tax returns.
- For IT refunds, taxpayers may end up **waiting as long as 15 months if not more**, as **each assessment year's taxes are filed in the following financial year**. Several people called this **unnecessary harassment and blocking of funds for honest taxpayers**. They also questioned **the need for a 20% levy** if the intent was to track such spending which is likely captured by the banks issuing credit cards already.
- A 2% or 5% TCS would have done the tracking job as well. Concerns were also raised on **employees using cards during overseas work trips**, and **escalating costs for those who aspire for a foreign holiday**.

Govt's arguments

- Reacting to sharp reactions from industry leaders, the Finance Ministry issued a statement highlighting instances that have come to their notice **where LRS payments are disproportionately high when compared to individuals' disclosed incomes.**
- It said **bona fide business visits overseas by employees won't be affected** and the primary impact will be on tour travel packages, gifts to **non-residents** and **domestic high net-worth individuals** investing in assets such as **real estate, bonds, stocks outside India.**
- The ministry stressed that **the 20% TCS rate is "not" high.** It also pointed out "The tax rate slab of 20% starts in the new regime for incomes over ₹12 lakh and is 30% for incomes over ₹15 lakh".

Made to pullback...

- These disclaimers **didn't have their intended effect.** Even the govt's supporters termed this **a return to "tax terrorism",** a word often used by BJP leaders to target its predecessor UPA govt.
- As a consequence, the Ministry did **a partial U-turn.** Payments abroad by an individual using their international credit cards up to ₹7 lakh per financial year **were exempted from the TCS levy as well as the LRS calculations,** but **debit cards were also included within the same limit.**
- While this move lessened the criticism to some extent, concerns still remain **about the levy's rationale and rate.** Frequent business travellers **may outrun the ₹7 lakh threshold quickly** and **await clarity on distinguishing personal card spends from business-related spends.**
- Notably, **despite a rise in LRS outflows to about \$24 billion in 2022-23, India's forex reserves remain robust at about \$600 billion.**

Increased limit for tax exemption on leave encashment for non-government salaried employees notified

Relevance: Prelims & Mains Paper III; Economics

Why in news?

- The tax exemption on **leave encashment of non-government salaried employees** (in respect of the period of earned leave at his credit at the time of his retirement, whether on superannuation or otherwise) was **earlier upto a limit of Rs.3 lakh only** under **section 10(10AA)(ii) of the Income-tax Act,1961(the Act)**.
- In pursuance to the proposal in the Budget Speech, 2023, by the Union Finance Minister, the Central Govt has notified **the increased limit for tax exemption** on leave encashment on retirement or otherwise of non-government salaried employees **to Rs. 25 lakh w.e.f. 01.04.2023**.
- The aggregate amount exempt from income-tax under section 10(10AA)(ii) of the Act **shall not exceed the limit of Rs. 25 lakh** where any such payments are received by a non-government employee from **more than one employer** in **the same previous year**.
- Further, the amount exempt from income-tax under section 10(10AA)(ii) of the Act **shall not exceed the limit of Rs. 25 lakh** as **reduced by the tax exemption already allowed** in the **total income** of the employee under section 10(10AA)(ii) of **any previous year or years**.

ENVIRONMENT & BIODIVERSITY

Barsu refinery project in Maharashtra faces protest from locals

Relevance: Prelims & Mains Paper III; Environment

Why in news?

- The proposed setting up of **an oil refinery and petrochemicals project** at Barsu-Solgaon region in Ratnagiri district of Maharashtra is facing opposition.
- Local people are opposing this project on the grounds of **environmental degradation, pollution, displacement** and **loss of livelihood**.



Project Details

- This proposed project is **a joint venture on a fifty-fifty ratio between three public sector oil companies of India-- Indian Oil, Bharat Petroleum and Hindustan Petroleum and two foreign companies – Saudi Aramco and Abu Dhabi National Oil Company.**
- The three Indian oil companies have a share of 50:25:25 respectively.
- Notably, this whole project is called **Ratnagiri Refinery and Petrochemicals Limited (RRPCL)**. It was formed in 2017 and is named after the region where the refinery was initially planned.

Political arguments and shifts

- The said refinery project was initially proposed to be set up in Nanar, also in Ratnagiri.
- However, it got stuck after it was opposed by the locals and the Shiv Sena, which was in power in alliance with the BJP in 2015.
- During the 2019 Maharashtra Assembly elections, the Shiv Sena successfully put pressure on the BJP to drop Nanar as the project site. Uddhav Thackeray, the CM of the Maha Vikas Aghadi govt, wrote to the Centre that the project be shifted to Barsu-Solgaon.
- The Eknath Shinde govt is now questioning Thackeray's opposition to the project in Barsu-Solgaon, alleging that the present opposition is part of the politics played by the Thackeray faction of the Shiv Sena.
- The latter's stand is that the party will go by the will of the local people.

Scientifically proven hazards

- As per Berkeley University U.S.A, adverse health effects of living near a refinery include: increased risk of asthma, cancers, birth defects, neurological damage, cardiovascular damage, difficulty breathing and blood disorders.

Rising stray dog bites across India related to poor waste management, say experts



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- Srinagar has been witnessing many cases of street dogs attacking the city's residents in the past few months. In fact, this has been the case in many other Indian cities too!
- These incidents have put the spotlight on the link between urban solid waste management and stray dog attacks.
- Frequent reports of dogs chasing people down the road, attacking and even "mauling" people to death have made the management of stray dogs an administrative and legal issue.
- As per experts, what also determines how frequently, and where, these attacks happen, is how efficiently a city's sanitation and waste disposal facilities operate.
- According to them, unless cities learn to manage solid waste better, rabies vaccines and dog sterilization will have little effect.

Dogs' fight for survival!

- The "carrying capacity" — the ability of a city to support a species — is determined by the availability of food and shelter.
- Free-ranging dogs, in the absence of these facilities, are scavengers that look around for food, eventually going towards exposed garbage dumping sites.
- A 2021 Bengaluru-based study recommended steps to reduce the carrying capacity of the environment by regulating feeding around bakeries and restaurants and improving waste management in public spaces.

India's rising solid waste

- A population boom in Indian cities has contributed to **a massive rise in solid waste**.
- Indian cities **generate more than 1,50,000 metric tonnes of urban solid waste every day**. As per a 2021 UN Environment Program report, **about 931 million tonnes of food available to consumers ended up in households, restaurants, vendors and other food service retailers' bins in 2019**.
- This food often serves as a source of food for hunger-stricken, free-roaming dogs that move towards densely-populated areas in cities, such as urban slums which are usually located next to garbage dumping sites and landfills.

Studies call for mutual co-existence!

- Urban dogs are believed to have a distinct set of behaviours as compared to rural dogs, as they have **learnt to develop survival techniques in fast-paced, often hostile urban environments**.
- This means they are independent, alert, and friendly towards humans.
- A study found that **dogs do not usually pose a threat to human well-being, and proper management of solid waste and a tolerant, if not friendly attitude towards dogs can ensure their peaceful co-existence with us**.
- Notably, the packs of stray dogs become territorial and aggressive about public spaces where they live and are fed.
- In Feb. this year, the Bombay High Court also orally observed that if dogs are fed and cared for, they will become less aggressive.
- Another study which had similar findings, concluded that free-roaming dogs "rarely" attacked humans and reacted only on provocation. As per it, **humans played the predominant role in initiating both positive and negative behaviours among dogs**.

Panel recommends total ban on diesel vehicles in India by 2027



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- A panel formed by the Ministry of Petroleum and Natural Gas has recommended a ban on the use of diesel-powered four-wheel vehicles by 2027 in cities with a population of more than 1 million, and instead shift to electric and gas-fuelled vehicles.
- The Energy Transition Advisory Committee has also recommended that city transport should be a mix of Metro trains and electric buses by 2030.

Background of this proposal

- The panel's recommendations come in the wake of the govt's stated aim to reduce greenhouse gas emissions, and to produce 40% of its electricity from renewables as part of its 2070 net zero goal.
- Diesel currently accounts for about 40% of India's petroleum products consumption.
- The proposed ban will have a significant footprint.

Diesel car makers in India

- Maruti Suzuki, the country's largest passenger vehicle manufacturer, stopped making diesel vehicles from April 1, 2020. It has signaled that it does not have plans to re-enter this segment.
- The diesel engine is, however, part of models sold by Hyundai and Kia, and Toyota Motor's Innova Crysta range.
- Tata Motors, Mahindra, and Honda have discontinued production of 1.2-litre diesel engines; diesel variants are available only for 1.5-litre or higher engine capacity.
- Since 2020, most carmakers have taken significant steps towards phasing out their diesel models. As a result, the contribution of passenger vehicles to overall diesel vehicle demand has fallen to just 16.5%, compared to 28.5% in 2013.

Issues with the proposal!

- It is not yet clear how the proposal for a ban, if accepted, will unfold and how practical it would be to implement. This is especially true in the case of medium and heavy commercial vehicles that are used for the transport of goods on highways, and for buses plying in most Indian cities, where diesel is the primary fuel.
- Even if the ban on diesel for commercial vehicles were to have a longer transition time, significant disruption could still happen.
- Around 87% of diesel fuel sales are in the transport segment, with trucks and buses accounting for about 68%. U.P., Maharashtra, and Haryana make up almost 40% of the diesel sold in India. While it seems easier to convert diesel trucks to compressed natural gas (CNG), there are certain limitations — including CNG being used for shorter distances, and its lower tonnage carrying capacity.
- Also, many auto industry players argue that carmakers having a presence in the diesel segment are already in compliance with current emission norms, and have invested heavily to transition their diesel fleet from BS-IV to BS-VI emission norms.

Reasons why people prefer diesel vehicles

- The higher fuel economy of diesel engines over petrol powertrains is one factor. This comes from the greater energy content per litre of diesel, and the in-built efficiency of the diesel engine.
- Diesel engines do not use high-voltage spark ignition (spark plugs), and thus use less fuel per km, as they have higher compression ratios, making it the fuel of choice for heavy vehicles.
- Also, diesel engines offer more torque (rotational or turning force) and are less likely to stall as they are controlled by a mechanical or electronic governor, thereby proving to be better for haulage.

Carmakers exit from the diesel segment

- The higher compression ratio of diesel engines means there are increased emissions of oxides of nitrogen (NOx), one of the main drawbacks of diesel engines versus petrol.
- The Volkswagen emissions scandal, which led to an increase in the negative perception against diesel across markets, including India was another major factor.
- Also, the reason why most carmakers announced an exit from the diesel segment was the rollout of the new BS-VI emission norms from April 1, 2020. The govt's decision to jump directly from BS-IV to BS-VI is the reason carmakers such as Maruti Suzuki decided to leave the diesel vehicle segment.
- Notably, while petrol vehicles shift to BS-VI required upgrades for just catalysts and electronic control, for diesel vehicles, these upgrades were more complicated and involved higher costs.
- Such a prohibitively high cost of upgrading diesel engines to meet the new standard was not viable for these carmakers.

Global warming: India heats up slower than the world average



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- The annual mean temperature of the world is known to have increased by 1.1 degree Celsius from the average of the 1850-1900 period.
- But this increase **is not uniform**. It varies in different regions and also at different times of the year. This single number denoting global temperature increase, which reflects the dangers of climate change, **is based on several different averages**.
- Temperature rise over land is much higher than over oceans. Over land, the annual mean temperatures have risen by as much as 1.59 degree Celsius since preindustrial times, according to the latest report of the Intergovernmental Panel on Climate Change. **Oceans, in contrast, have warmed by about 0.88 degree Celsius.**
- The warming trends over the Indian region are very different.
- As per an assessment of climate change over the Indian subcontinent, **annual mean temperatures had risen by 0.7 degree Celsius from 1900.**
- This is **significantly lower than the 1.59 degree Celsius rise for land temperatures across the world.**
- It could give the impression that the problem of climate change over India was **not as acute as other parts of the world. But that is not entirely accurate.**

Why is warming over India lower?

- The increase in temperatures is known to be **more prominent in the higher altitudes, near the polar regions**, than **near the equator**. This is primarily because heat transfers from the tropics to the poles through prevailing systems of air circulation. India happens to be in **the tropical region**, quite close to the equator. Notably, **India's location is also in the lower latitudes**. It is an established scientific fact that **higher latitudes experience greater warming**.
- The polar regions, particularly the Arctic, have seen significantly greater warming. The IPCC report says **the Arctic region has warmed at least twice as much as the world average**. Its current annual mean temperatures are about 2 degrees Celsius higher than pre-industrial times.
- Again, this happens because of a variety of reasons mentioned earlier. Another prominent cause is **what is known as the albedo effect**, or **how much sunlight a surface reflects**.
- The ice cover in the Arctic is melting, because of which **more land or water is getting exposed to the Sun**. Ice traps the least amount of heat and reflects most of the solar radiation when compared with land or water.
- The **warming in the polar regions** account for **a substantial part of the 1.1 degree Celsius temperature rise** over the entire globe.

Higher warming over land than oceans

- Land areas have a tendency to get heated faster, and by a larger amount, than oceans. Oceans have a higher capacity to cool themselves down through the process of evaporation.
- However, longer-term enhanced heating trends over land are due to other, more complicated, physical processes involving land-ocean-atmospheric interactions.

Impact of aerosols

- Aerosols refer to all kinds of particles suspended in the atmosphere. These particles have the potential to affect the local temperature in multiple ways.
- Many of these scatter sunlight back, so that lesser heat is absorbed by the land. Aerosols also affect cloud formation. Clouds, in turn, have an impact on how much sunlight is reflected or absorbed.
- Aerosol concentration over the Indian region is quite high, due to natural as well as man-made reasons. Due to its location in the tropics and the arid climate, India is no stranger to dust.
- India also happens to be experiencing heavy pollution right now. Emissions from vehicles, industries, construction, and other activities add a lot of aerosols in the Indian region. A reduction in warming could be an unintended but positive side-effect.

RBI regulations on green deposits



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- In April 2023, the Reserve Bank of India (RBI) came up with a regulatory framework for banks to accept green deposits from customers.
- Under it, banks that accept green deposits will have to disclose more information on how they invest these deposits.

What are green deposits?

- Green deposits are not very different from the regular deposits that banks accept from their customers.
- The only major difference is that banks promise to earmark the money that they receive as green deposits towards environment-friendly projects. For e.g., a bank may promise that green deposits will be used towards financing renewable energy projects that fight climate change.
- A bank may also avoid using green deposits to invest in fossil fuel projects that are considered harmful to the climate. A green deposit is just one product in a wide array of other financial products such as green bonds, green shares, etc., that help investors put money into environmentally sustainable projects.

What does the RBI's regulatory framework say?

- The RBI's framework for the acceptance of green deposits lays down certain conditions that banks must fulfill to accept green deposits from customers. Firstly, banks will have to come up with a set of rules or policies approved by their respective Boards that need to be followed while investing green deposits from customers.
- These rules need to be made public on the banks' websites and banks will also have to disclose regular information about the amount of green deposits received, how these deposits were allocated towards various green projects, and the impact of such investments on the environment.
- A third-party will have to verify the claims made by banks regarding the projects in which the banks invest their green deposits as well as the sustainability credentials of these business projects.
- The RBI has come up with a list of sectors that can be classified as sustainable and thus eligible to receive green deposits. These include renewable energy, waste management, clean transportation, energy efficiency, and afforestation.
- Banks will be barred from investing green deposits in business projects involving fossil fuels, nuclear power, tobacco, gambling, palm oil, and hydropower generation.
- The new rules are aimed at preventing greenwashing, which refers to making misleading claims about the positive environmental impact of an activity. For example, a bank may advertise that their green deposits will have a huge positive impact on the environment, while the actual impact may be minimal.
- A bank could also invest in projects that are not environment-friendly, perhaps because such projects offer higher returns, under the guise of green investing.

A check on ground reality!

- Depositors who care about the environment may get some satisfaction from investing their money in environmentally sustainable investment products. However, there are challenges, for the range of projects in which green funds can be invested by the bank is limited by design.
- When it comes to protecting the environment, green investing enthusiasts believe that putting money into green projects may be one of the best ways to help the environment. Critics, however, argue that green investment products are often just a way to make investors feel good about themselves and that these investments don't really do much good to the environment.
- Moreover, in a complex world where any action involves second-order effects that are difficult to see, it can be extremely hard to know if a project is really environmentally sustainable.



Cheetah cubs die in Kuno reserve



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- Three of the four cheetah cubs that were born at the Kuno National Park, Madhya Pradesh, died recently from natural causes.
- In response, the govt has constituted a new committee of experts that will monitor Project Cheetah.

Project Cheetah details

- India's cheetah relocation programme is perhaps among the most ambitious of its kind in the world. The attempt is to, over the next decade, bring in five to 10 animals every year until a self-sustaining population of about 35 is established.
- Unlike cheetahs in South Africa and Namibia, which live in fenced reserves, India's plan is to have them grow in natural, unfenced, wild conditions.
- At Kuno, only six of the 17 adults are in the wild with the rest lodged in large, specially designed enclosures to help the animals acclimatise to Indian conditions.
- The plan is to release all the animals into the open by the year-end. The animals are radio-collared and tracked 24/7. But interventions are to be exceedingly rare and only in the case of emergencies.

Cause of cheetah cubs deaths

- On May 23, forest officials tracking the cheetahs observed that one of the cubs, **barely two months old, seemed disoriented and was unable to trail its mother, Jwala**, as part of their regular outings.
- A closer inspection revealed that the cub was **unable to lift itself** and, despite an examination by veterinarians, **soon died**. The remaining three, though mobile, **did not appear healthy** and this prompted the vets to take the animals in for a closer inspection.
- Two of the cubs were subsequently discovered to be **exceedingly frail** and **malnourished** and, by the evening of the same day, **they too had died**. The post-mortem has attributed the cause of their death to be **“extreme heat, weakness and malnutrition”**.
- **All the cubs were underweight**. One of the cubs is reportedly well and though weak, is **recovering rapidly**. The authorities plan on raising the cub for a month and attempt **reuniting it with its mother**.

Are these deaths unusual?

- The **death of three of four cubs — the first litter born in India** has come soon after the death of **three adult cheetahs**.
- Earlier this month, **an adult female, Daksha**, died following **injuries involving a skirmish among the animals**. Two other animals, **Sasha** and **Uday**, died in March and April from **renal infection** and **cardiovascular problems, respectively**.
- Experts say that **cheetah cubs in the wild have a very high mortality rate** compared to **tigers and lions**. Cheetah cubs have **a survival rate of only 10%** and roughly the same fraction makes it to adulthood.
- As per a 1994 study by an expert from the University of Cambridge, **66% of cheetah cubs deaths** are due to **predation**, and **about 16%** to **“abandonment by the mother”**. However, given that these animals **were in protected enclosures**, such a scenario **does not yet apply to the Indian cheetah**.
- Experts have also said that this was the first litter born to the Namibian cheetah, **which itself was not truly wild** and was ‘hand-bred’ and, therefore, **‘inexperience’ on the mother’s part** in tending to her cub may have played a part.

An analysis of Project Cheetah

- In **Sept 2023**, it will be **one year** since **a batch of eight cheetahs from Namibia** arrived in **India**. They were followed by **12 others from South Africa** in **Feb 2023**.
- The official **Cheetah Action Plan**, the guiding document behind the project, observes that **even half the cheetahs surviving the first year** would be “**an indicator of success**”.
- Independent critics have, however, argued that **there are some basic flaws in the project**.
- For one, **it is a mistake** to have had **all 20 cheetahs at Kuno** as there is **too little space and prey**, given that the animal is a chaser and needs larger fields of play. Some animals should have gone to the **Mukundara reserve** in **Rajasthan**.
- Forest officials in Madhya Pradesh have also admitted that **they are stretched**. However, the officials in the National Tiger Conservation Authority, the nodal agency of the Environment Ministry tasked with coordinating the project, say that **Kuno is capable of hosting the first lot of animals** and **future batches will be sent to other reserves**.
- The experience of **raising cheetahs in fenced reserves in Africa** can't be replicated in India, say experts, because India's cultural values **promote coexistence with beasts**, and that is the reason for the success of **tiger, lion and leopard conservation programmes**.

SCIENCE & TECHNOLOGY

'Godfather of AI' Geoffrey Hinton cautions against its impact



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- British researcher and academic Geoffrey Hinton, who is often referred to as **one of the godfathers of artificial intelligence**, has **ended his nearly decade-long association with Google**. He has **independently warned against the dangers of further developing AI without analysing its impact**.
- Hinton has tweeted "I left [Google] so that I could talk about the dangers of AI without considering how this impacts Google"
- Notably, **Google began testing this year for its own AI chatbot, named Bard**.

Who is Geoffrey Hinton?

- Hinton who is 75, began his career with a BA in Experimental Psychology in 1970. He followed it with a PhD in Artificial Intelligence in 1978.
- He has also served as a faculty member in the Computer Science department at Carnegie-Mellon University in Pennsylvania, USA.
- **In the 1980s, as most AI research in the U.S. was funded by the US military, Hinton said he was opposed to contributing to research for possibly using AI in the battlefield. This prompted his move to Canada.**
- He then became a fellow of the Canadian Institute for Advanced Research and moved to the Dept of Computer Science at the University of Toronto.
- At the university, he is **an emeritus distinguished professor** and **has written numerous academic papers on machine learning**.
- Since 2013, he has been **working half-time for Google as a VP Engineering fellow**.

Hinton's role in AI development

- During his university days, Hinton “embraced an idea called **a neural network... a mathematical system that learns skills by analyzing data.**”
- He said the aim **was to solve practical problems through novel learning algorithms – inspired by how the human brain works with its networks of neurons or nerve cells.**
- The term ‘neural networks’ refers to “**systems composed of layers of relatively simple computing elements called ‘neurons’ that are simulated in a computer.**” These “neurons” only loosely resemble the neurons in the human brain, and influence one another.
- A breakthrough came in 2012, **when Hinton and two of his students built a neural network to analyse thousands of photos and teach itself to identify common objects.**
- Later on, Google spent \$44 million to acquire a company founded by the trio. **It incorporated elements from this into its social media website Google+, for image search.**
- As per Hinton, **neural networks are the best way to do speech recognition, to classify objects in images, and to do machine translation.**
- He adds that these big networks are still about 100 times smaller than the human brain, but they already raise very interesting questions about the nature of human intelligence”.



Hinton's reasons to criticize AI

- Hilton has expressed concern on three major counts.
- First, given tools like ChatGPT search the internet for information and create a final product, he believes the internet might soon be flooded with false photos, videos and text, etc. and the average person will “not be able to know what is true anymore.”
- Second, over time it may lead to machines taking over human jobs.
- He further adds that the kind of intelligence humans are developing is very different from the intelligence they themselves have. While humans are biological systems, AI are digital systems. This means there is a vast difference in terms of capacity, where they can instantaneously process large amounts of data. In the future, such data could be used by “bad actors” as they wish.

Others with similar views

- Hinton is not alone in voicing such fears...
- In early April, more than 1,000 technology leaders and researchers, including Apple co-founder Steve Wozniak and Tesla founder Elon Musk, signed an open letter calling for a six-month pause on the developing AI systems further, saying they “profound risks to society and humanity.”
- They also raised concerns over misinformation and said companies must develop a set of shared safety protocols for advanced AI design and development at this time that can be overseen by independent outside experts.
- These leaders have also called for creating a proper framework with a legal structure and foolproofing including watermarking systems “to help distinguish real from synthetic”.

Smart gel-based 3D Printed Conduit to help non-invasive nerve repair



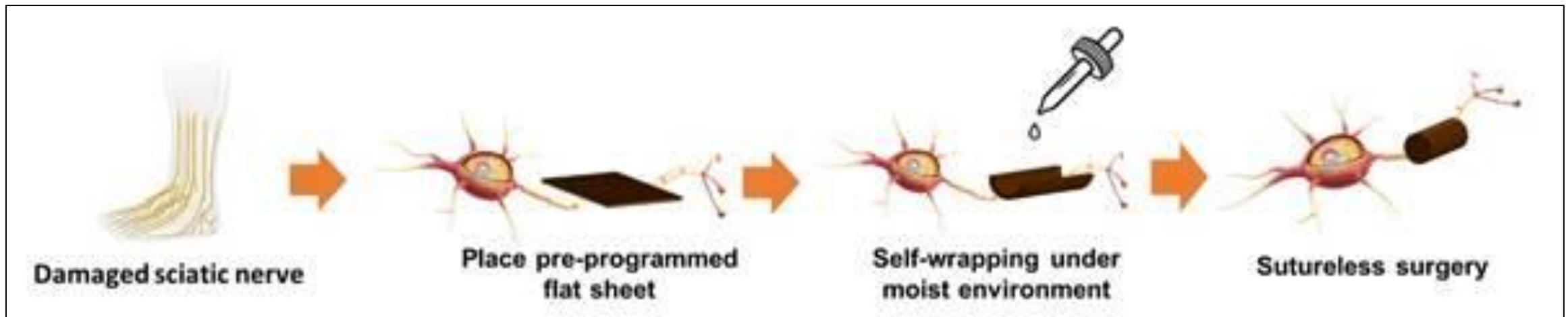
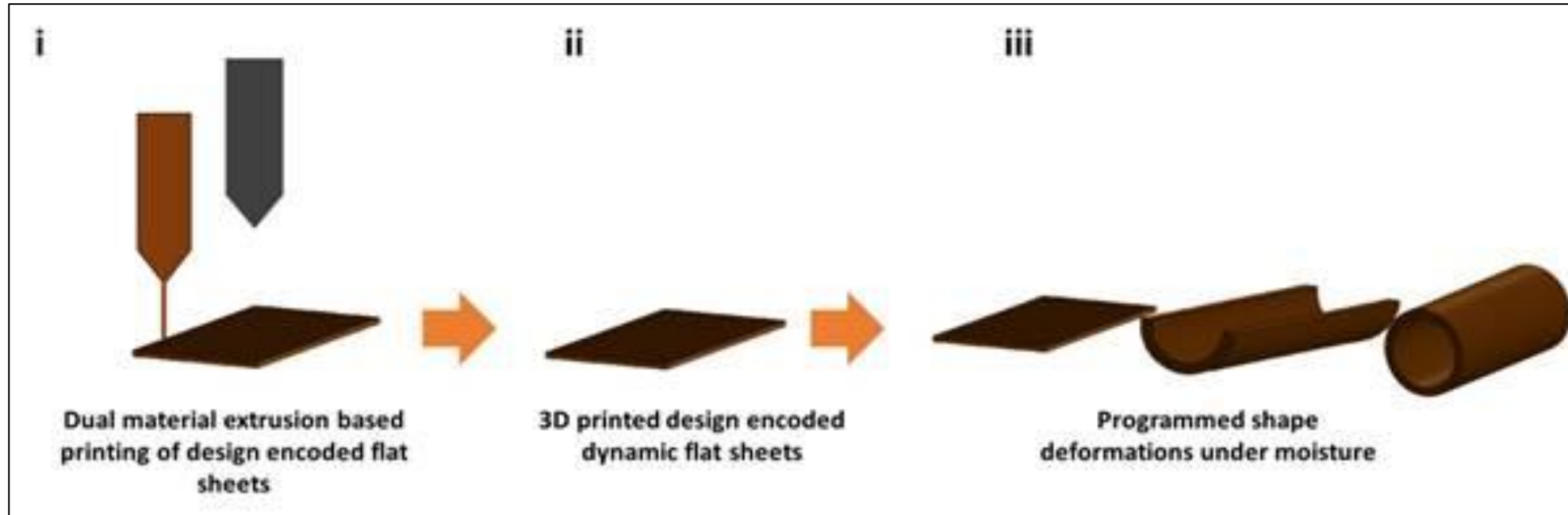
Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- There has been a significant medical breakthrough in the field of surgery and healing.
- Researchers at the Indian Institute of Science (IISc) in Bengaluru have designed a new smart gel-based sheet using three-dimensional (3D) printing technology. This sheet can self-roll into a tube during surgery to form a nerve conduit that could help reduce the complexity of surgeries and aid rapid healing of nerve injuries.
- Presently, the best treatment for peripheral nerve injuries is autografts. Now, bioresorbable polymer-based conduits are being explored for clinical use as alternatives.
- But these treatment strategies suffer from several limitations, such as donor site morbidity in the case of autografts and the necessity for sutures that demand highly skilled microsurgeries, and additional complications posed by sutures.

What is 3D printing?

- In 3D printing, a virtual model of the part is created using design software. The part is then fabricated using a 3D printer by layer-upon-layer deposition of the material.
- 3D printed parts can further undergo a shape change on demand upon activation after fabrication. Such technologies are now widely known as four-dimensional (4D) printing, where time is the extra dimension.
- Such 4D-printed parts have not been used in the clinic as yet. But such emerging technologies could pave the way for a new generation of medical devices that surgeons can deploy during surgery to heal nerves and many other tissues in coming years.
- They can offer benefits such as reduced complexity of surgeries, deployment by minimally-invasive procedures, and faster healing.



Bluesky emerges as a potential alternative to Twitter



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The social media giant Twitter is currently in chaos. Since its takeover by Elon Musk, Twitter's workforce has dropped from nearly 8,000 to around 1,000. Besides this, technical problems and outages of this platform have increased.
- Apart from these issues, the blue tick verification and API access becoming paid features have resulted in several users searching for alternative social media platforms.
- Though Mastodon emerged as an early contender, Bluesky has emerged as a potential substitute for Twitter.

What is Bluesky?

- Bluesky is a micro-blogging platform and social web built on the AT Protocol (Authenticated Transport Protocol).
- Bluesky might be classified as a Twitter competitor due to its founding team but is different in terms of its structure, as it is meant to form part of a decentralised ecosystem.
- Users of apps built on the AT Protocol would be able to move between platforms without losing their followers, media, work, and data. This feature which is called account portability is a major part of the AT Protocol's structure.
- As per Bluesky, its founding mission is to “develop and drive large-scale adoption of technologies for open and decentralized public conversation.”

Who founded Bluesky?

- Bluesky's CEO is Jay Graber, a software engineer with a background in cryptocurrency.
- Bluesky was launched in 2019 by former Twitter CEO Jack Dorsey, who chose Ms. Graber to lead the project.
- Twitter and Bluesky were meant to eventually connect and work with each other, but the companies ended their service agreement last year.

Can it replace Twitter?

- Bluesky is currently in private beta, meaning that only a select group has been allowed to join via invite codes.
- Others interested in trying it out can add themselves to a waitlist. Regular Bluesky members are also given a new invite code at periodic intervals that they can share with new applicants they deem trustworthy.
- As per Bluesky, it had more than 50,000 users at the end of April. It maintains that it would distribute invites at its own discretion to maintain the integrity of the platform.
- Thus, it is unlikely that Bluesky will replace Twitter any time soon, as it continues to grow its membership at a highly controlled rate.



How Bluesky works?

- Bluesky has a user interface similar to Twitter, with options to comment, share, or “heart” posts.
- Celebrity users have fewer “likes” and “shares” when compared to their Twitter platforms, due to the smaller number of participants on Bluesky.
- Platform users also have the ability to set their domains as their handle, making it easier to link their accounts across ecosystems, and authenticate their identity.
- While Bluesky aims to achieve a more decentralised structure, it is currently being regulated by an official team and is hosted on a single server.

Content moderation

- Bluesky has defended its invite code sign-up process, claiming that it is easier to restrict sign-ups than clean up network abuse after quickly letting in a large number of users.
- As per Bluesky, it will follow automated filtering, manual admin actions, and community labelling to moderate content.
- Users will be able to add labels to posts based on their own values, and other users can also adopt these if they wish to do so.
- Notably, when Bluesky users targeted the posts of a controversial Bluesky member, they discovered that the block function was not yet available. This feature was later added.
- Users spreading hate or bullying others have also been banned from the platform.

Allahabad HC allows carbon dating of Gyanvapi 'Shivling'



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The Allahabad High Court has ordered a “scientific survey”, including carbon dating, of a “Shivling” said to have been found at the Gyanvapi mosque complex in Varanasi after setting aside a lower court order on the issue.
- Last May 16, a court-ordered videographic survey of the Kashi Vishwanath temple-Gyanvapi mosque was completed by a Commission appointed by a local court.
- During the survey proceedings, a structure – claimed to be a “Shivling” by the Hindu side and a “fountain” by the Muslim side – was found inside the mosque premises.
- In their plea before the High Court, the Hindu petitioners had requested “to make scientific investigation by carbon dating or otherwise to determine the age, nature and other constituents of the Shivlingam.”

What is carbon dating?

- Carbon dating is a widely-used method to establish the age of organic materials, things that were once living.
- Living things have carbon in them in various forms. The dating method is based on the fact that Carbon-14 (C-14), an isotope of carbon with an atomic mass of 14, is radioactive, and decays at a well-known rate. This is how it works:
- The most abundant isotope of carbon in the atmosphere is C-12. A very small amount of C-14 is also present. The ratio of C-12 to C-14 in the atmosphere is almost static and is known.
- Plants and animals which get their carbon from the atmosphere via photosynthesis and food respectively, also acquire C-12 and C-14 in roughly the same proportion as is available in the atmosphere.
- When they die, their interactions with the atmosphere stops. While C-12 is stable, the radioactive C-14 reduces to one-half of itself in about 5,730 years — known as its ‘half-life’. The changing ratio of C-12 to C-14 in the remains of a plant or animal after it dies can be measured and can be used to deduce the approximate time when the organism died.

The case with non-living things

- Though extremely effective, **carbon dating cannot be applied in all circumstances. It cannot be used to determine the age of non-living things such as rocks.**
- Also, the age of things **that are more than 40,000-50,000 years old cannot be arrived at through carbon dating.** This is because after 8-10 cycles of half-lives, the amount of C-14 becomes almost very small and is almost undetectable.
- But there are other methods to calculate the age of inanimate things, many of which are based on the same principle as carbon dating. So, instead of carbon, **decays of other radioactive elements** that might be present in the material **become the basis for the dating method.**
- These are known as **radiometric dating methods.** Many of these involve **elements with half-lives of billions of years,** which enable scientists to reliably estimate the age of very old objects.

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- Two commonly employed methods for dating rocks are **potassium-argon dating** and **uranium-thorium-lead dating.** The radioactive isotope of potassium decays into argon, and their ratios can give a clue about the age of rocks.
- **Uranium** and **thorium** have **several radioactive isotopes,** and all of them **decay into the stable lead atom.** The ratios of these elements present in the material can be measured and used to make estimates about age.
- There are also methods to determine how long an object has remained exposed to sunlight. The most common of these is called **cosmogenic nuclide dating,** or **CRN,** and is regularly applied **to study the age of ice cores in polar regions.**
- In some situations, carbon dating can be used indirectly as well. For e.g, a way in which the age of ice cores in glaciers and polar regions is determined **by studying carbon dioxide molecules trapped inside large ice sheets.** Determining their age gives a rough estimate of the time when the ice sheets were formed.
- How long **a rock has been at a particular place** can also be determined similarly — **dead plants or insects trapped underneath** can give an indication of when that rock reached that place.

Carbon dating's role in Gyanvapi case

- In the Gyanvapi case, the Hindu petitioners claim that the Gyanvapi mosque was built on an ancient Hindu temple. The purported "Shivling" is being cited by the Hindu side as evidence for the existence of the temple.
- In this case, the petitioners' purpose would likely be served if it was established that the "Shivling" existed at that place before the mosque came up in 1669.
- But there will be specific limitations. The structure cannot be uprooted or disrupted, as per orders of the Supreme Court, so methods like looking for trapped organic material beneath it might not be feasible.



Alternative and modern medicines tie up to conduct human clinical trials



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa, and Homoeopathy (AYUSH) and the Indian Council of Medical Research (ICMR) have decided to collaborate to undertake quality human clinical trials.
- This is aimed at generating evidence on the benefits of using ayurveda along with modern medicine (evidence-based medicine) in treating certain disease conditions of national importance.

Details

- This collaboration will be restricted to ayurveda. The other systems of AYUSH — yoga, unani, siddha and homoeopathy — may be included, and each system will be tested together with modern medicine when the central councils of the respective AYUSH systems are ready to work with the ICMR.
- An expert committee will soon decide the area/disease conditions to be included for detailed clinical testing using both ayurveda and modern medicine.
- Initially, clinical trials for each disease may have two arms — modern medicine as the standard of care as well as a combination of modern medicine and ayurveda.
- The arm that uses both ayurveda and modern medicine will, if at all, only be able to validate the superiority of combining the two for better outcomes. Scientific validation of superior outcomes of combined therapy using ayurveda and modern medicine will form the basis on which integrated medicine will be offered to patients.
- Encouraging trial outcomes might probably serve as a starting point to undertake further trials using ayurveda interventions alone to evaluate their effectiveness and understand the mechanism of action; this is currently not within the scope of the agreement.

(more ahead)

Cont'd

- While the initiative may right away not provide scientific validation of ayurveda interventions in treating disease conditions when used singularly, it is **the first major step in evidence-based approach of validating medical interventions.**
- Though trials using ayurveda and other systems of AYUSH have been conducted in the country, **they suffer from major limitations**, thus making the outcomes meaningless.
- The ICMR's expertise is likely to help in overcoming the major obstacle of scientific validation. All systems of AYUSH currently suffer from it!
- No sincere, large-scale attempts have been made to address this serious shortcoming. The collaboration with the ICMR will prove beneficial in this regard.

Mitochondrial Donation Treatment results in a UK baby having three parents



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- It has been announced that a baby was born using three persons' DNA in the U.K.
- The baby has three parents, technically, deriving the mitochondria from a donor apart from genetic material (DNA) from biological parents.
- Pioneering technology was used to facilitate this, in order to prevent the child from inheriting the mother's mitochondrial disease.
- The baby carries most of its DNA from its parents, and a minor per cent from the donor, whose mitochondria has been used while fertilising the egg.

What is mitochondrial disease?

- Mitochondria are basically the powerhouses of the cells, they generate the energy, and thus are also responsible for cell function in the human body.
- Certain defects might occur impacting the way the mitochondria produce energy for the cells (Specially in the 'energy-hungry' tissues of the brain, nerves, muscles, kidneys, heart, liver), thereby impacting cell function.
- The diseases arising out of such mitochondrial mutations are called mitochondrial diseases. When the mitochondria are impaired and do not produce sufficient energy, that affects how the organs function, leading to several symptoms across the body, including brain damage, organ failure and muscle wastage.
- The symptoms get more intense as a child grows and have no cure. Estimates put the incidence of mitochondrial diseases as one in 5000 people.
- In the present case, the mother had a mitochondrial disease she was intent on not passing on to her baby, and clearly did not want to have a donor egg, for the baby would also carry the genetic material of the donor.

The scientific process

- Mitochondrial diseases are **only passed on by the mother**, and research has been attempting to find a way out of protecting the infant from inheriting the disease.
- Here, through an advanced In Vitro Fertilisation technique, **the baby's biological father's sperm was used to fertilise the eggs from the biological mother**, who has a mitochondrial disease, and **a third, female donor with clear mitochondria, separately**.
- Then, the **nuclear genetic material from the donor's egg is removed and replaced with the genetic material from the biological parents**'.
- The final product – the egg - which has the genetic material (DNA) from the parents, and the mitochondria from the female donor, is implanted in the uterus, and carried to full term to yield a baby **who will be free from the mother's mitochondrial disease**. This process is **termed Mitochondrial Donation Treatment (MDT)**.

A law to facilitate MDT

- Progress in MDT research which is also known **as mitochondrial replacement therapy (MRT)**, **led the UK govt to amend the law** allowing the procedure in 2015.
- Approval is given on a case-by-case basis by the UK's Human Fertilisation and Embryology Authority (HFEA), which has given the green light for at least 30 cases.
- So far, there have been **less than five such cases**.

US FDA relaxes blood donation rules for gay and bisexual men



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The US Food and Drug Administration (FDA) has formally ended its longstanding restrictions barring gay and bisexual men from donating blood.
- The agency is finalising a recommendation that includes **a questionnaire to screen donors based on their recent sexual activity** rather than **their sexual orientation or sex**.
- The move has come in line with the FDA in recent years easing its blanket ban on gay and bisexual men from donating blood.
- The prohibition was **first implemented during the HIV/AIDS crisis in the 1980s** and has been long criticized **as discriminatory** by the LGBTQI+ community and its supporters.

The changes

- As per the latest FDA guidelines, **gay and bisexual men in a monogamous relationship with a man won't have to refrain from sex before donating their blood**. Previously, **it was mandatory for them to have a three-month deferral period in which they refrained from having sex with another man**.
- The FDA had so far justified its long-running **lifetime ban** on blood donations from gay and bisexual men by claiming **that the policy helped it to keep HIV out of the blood supply**.
- It finally junked the prohibition in 2015 but said **men who have sex with men (MSM) would have to abstain from sex for one year before giving blood**. The time limit was **further reduced to three months** in 2020.
- Although the new guidelines have done away with this deferral period for monogamous MSM, **it stays in place for those who have had new or multiple partners, and anal sex, in the past three months**.

Persons prohibited from donating blood in India



- In March, the Centre told the Supreme Court that transgenders, gay people, and female sex workers aren't allowed to donate blood based on scientific evidence.
- It said, "There is substantial evidence to show that transgender persons, men having sex with men and female sex workers are at risk for HIV, Hepatitis B or C infections."
- The govt also cited research from a number of local and international "reputed scientific journals" such as the International Journal of Community Medicine and Public Health and the International Journal of STD & AIDS.

Nutritious value and benefits of Millets



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The consumption of millets is gradually becoming quite popular. Millets have numerous health benefits, including helping to lower your blood sugar and cholesterol levels.



What are millets?

- Millets are a group of small, round whole cereal grains. They belong to the Poaceae family, commonly known as the grass family.
- While it may look like a seed, millet's nutritional profile is similar to that of sorghum and other cereals.
- Considered an ancient grain, millets are used both for human consumption and livestock and bird feed.
- Millets are primarily grown and consumed in India, Nigeria, and other Asian and African countries
- Millets have gained popularity in the West because they are gluten-free and boasts high protein, fiber, and antioxidant contents.

Types

- Millets are divided into two categories — large and small millets, with major millets being the most popular or commonly cultivated varieties.
- Large millets include pearl, foxtail, proso, finger (or ragi).
- Small millets include Kodo, barnyard, little, Guinea, browntop, fonio and adlay (or Job's tears)
- Pearl millet is the most widely produced variety intended for human consumption.

Nutritional profile

- Like most cereals, **millet**s are **starchy grains** — meaning that **they're rich in carbs**. Notably, they also pack several vitamins and minerals.
- Millets provide **more essential amino acids than most other cereals**. These compounds are the building blocks of protein.
- Finger millet has the highest **calcium content of all cereal grains**, providing 13% of the daily value per 1 cooked cup (100 grams).

Other benefits

- Millets are rich in **phenolic compounds**, whose components **act as antioxidants** to protect our bodies from harmful oxidative stress.
- Millets are also **rich in fiber and non-starchy polysaccharides**, two types of undigestible carbs **that help control blood sugar levels**.
- Since millets also have **a low glycemic index (GI)**, meaning that **they are unlikely to spike our blood sugar levels**, they're considered an ideal grain for people with diabetes.
- Millets contain **soluble fiber**, which produces a viscous substance in your gut. In turn, **this traps fats and helps reduce cholesterol levels**.
- Millets are **a gluten-free grain**, making them a viable choice for people with celiac disease or those following a gluten-free diet.

Potential downsides!

- Despite their multiple health benefits, millets also contain **antinutrients** — compounds **that block or reduce your body's absorption of other nutrients** and may lead to deficiencies.
- One of these compounds — **phytic acid** — interferes with potassium, calcium, iron, zinc, and magnesium uptake. However, **a person with a balanced diet isn't likely to experience adverse effects**.
- Other antinutrients called **goitrogenic polyphenols** may **impair thyroid function**, causing **goitre** — an enlargement of one's thyroid gland that results in neck swelling.
- One can lower millet's antinutrient content significantly by soaking it overnight at room temperature, then rinsing it before cooking.

Cybercriminals abuse gaps in Aadhaar-enabled Payment System (AePS)



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- A worrying trend in the field of cybercrime has been on the rise over the past few months.
- While not sharing One Time Passwords (OTPs) or revealing bank account details is generally considered a fool proof idea to avoid falling into the trap of scammers, lately, cybercriminals have started using silicone thumbs to operate biometric POS devices and biometric ATMs to drain users' bank accounts.
- Not just individuals, cybercriminals have also been targeting govt institutions. In Hyderabad, in June 2022, a gang of cybercriminals was arrested for accessing document from Andhra Pradesh Registration and Stamps Department's official website to fraudulently withdraw ₹14.64 lakh from 149 customers.
- Authorities seized 2,500 cloned fingerprints, along with pen drives and other gadgets used to run this scam.
- Similar incidents have been reported in many different parts of the country.

What is AePS?

- Aadhaar-enabled Payment Services (AePS) is a bank-led model which allows online financial transactions at Point-of-Sale (PoS) and Micro ATMs through the business correspondent of any bank using Aadhaar authentication.
- The model removes the need for OTPs, bank account details, and other financial details. It allows fund transfers using only the bank name, Aadhaar number, and fingerprint captured during Aadhaar enrolment, according to the National Payments Corporation of India (NCPI).
- For AePs, these are the only inputs required for certain types of transactions, including cash deposit, cash withdrawal, balance inquiry, mini statement, Aadhaar to Aadhaar fund transfer, authentication, and BHIM Aadhaar pay.

Are AePS transactions enabled by default?

- Neither Unique Identification Authority of India (UIDAI) nor NPCI mentions clearly whether AePS is enabled by default.
- As per Cashless India, a website managed and run by MeitY (Ministry of Electronics and Information Technology), the service does not require any activation, with the only requirement being that the user's bank account should be linked with their Aadhaar number.
- Users who wish to receive any benefit or subsidy under schemes notified under section 7 of the Aadhaar Act, have to mandatorily submit their Aadhaar number to the banking service provider, according to UIDAI.
- Aadhaar is also the preferred method of KYC for banking institutions, thus enabling AePS by default for most bank account holders.

Leakage of biometric information

- While data breaches in Aadhaar have been reported in 2018, 2019, and 2022, UIDAI has denied that any Aadhaar data was breached. As per it, Aadhaar data, including biometric information, is fully safe and secure.
- However, UIDAI's database alone is not the only location where data can be leaked.
- Aadhaar numbers are readily available in the form of photocopies, and soft copies, and criminals are using Aadhaar-enabled payment systems to breach user information. Scammers have, in the past, made use of silicone to trick devices into initiating transactions.

Steps to secure Aadhaar biometric information

- The UIDAI is proposing an amendment to the Aadhaar (Sharing of Information) Regulations, 2016, which will require entities in possession of an Aadhaar number to not share details unless the Aadhaar numbers have been redacted or blacked out through appropriate means, both in print and electronic form.
- The UIDAI has also implemented a new two-factor authentication mechanism that uses a machine-learning-based security system, combining finger minutiae and finger image capture to check the liveness of a fingerprint.
- Additionally, users are also advised to ensure that they lock their Aadhaar information by visiting the UIDAI website or using the mobile app. This will ensure that their biometric information, even if compromised, cannot be used to initiate financial transactions.
- Aadhaar can be unlocked when the need for biometric authentication arises, such as for property registration and passport renewals, after which it can again be locked.

Procedure to lock Aadhaar online

- Aadhaar cards can be locked using the UIDAI website to generate a 16-digit VID number via SMS service. Users can also lock their Aadhaar biometric information using the My Aadhaar tab on the UIDAI website.
- The 16-digit code generated when locking the Aadhaar will be needed to unlock it. Users can also lock and unlock their Aadhaar information using the myAadhaar app, available for iOS and Android.

Procedure in case of a financial scam using Aadhaar

- If users have not already locked their Aadhaar biometric information, **they should do so immediately** in case of any suspicious activity in their bank accounts.
- Users are also advised to inform their banks and the concerned authorities as soon as possible. Timely reporting can ensure that **any money transferred using fraudulent means is returned to the victim**.
- The RBI in a circular has stated that **a customer's entitlement to zero liability arises where the unauthorised transaction occurs, and the customer notifies the bank within three working days of receiving a communication from the bank regarding such unauthorised transaction**.
- While banks and other financial service providers are instructed to inform customers of transactions through SMS and emails, lack of network or access to email IDs may stop them from doing so. As such, **users are advised to regularly check their bank accounts and inform their banking institution** in case of any suspicious activity.



Transformer, the Machine Learning model that powers ChatGPT



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- Machine Learning has become one of the most exciting technologies since the advent of the computer age.
- With each passing day, it is being used in more and more fields.

What is Machine Learning?

- Machine learning (ML), a subfield of artificial intelligence, teaches computers to solve tasks based on structured data, language, audio, or images, by providing examples of inputs and the desired outputs.
- This is different from traditional computer programming, where programmers write a sequence of specific instructions. Here, the ML model learns to generate desirable outputs by adjusting its many knobs – often in the millions.
- ML has a history of developing methods with hand-crafted features that may work only for specific, narrow problems.
- There are several such examples. In text, classifying a document as scientific or literary may be solved by counting the number of times certain words appear.
- In audio, spoken text is recognised by converting the audio into a time-frequency representation. In images, a car may be found by checking for the existence of specific car-like edge-shaped patterns.
- Such hand-crafted features are combined with simple, or shallow, learning classifiers, typically having up to tens of thousands of knobs. In technical terms, they are called parameters.

Deep neural networks

- In the first part of the 2010s, **deep neural networks (DNNs)** took over ML by storm, replacing the **classic pipeline of hand-crafted features and simple classifiers**.
- DNNs ingest **a complete document or image** and **generate a final output**, without the need to **specify a particular way of extracting features**.
- While these deep and large models have existed in the past, **their large size – millions of parameters – hindered their use**. The resurgence of DNNs in the 2010s is attributed to **the availability of large-scale data and fast parallel computing chips** called **graphics processing units**.
- Further, the models used for text or images were still different: **recurrent neural networks were popular in language-understanding** while **convolutional neural networks (CNNs) were popular in computer vision**, i.e. machine understanding of the visual world.

'Attention Is All You Need'

- In a pioneering paper entitled '**Attention Is All You Need**' that appeared in 2017, a team at Google proposed **transformers – a DNN architecture** that has today gained popularity **across all modalities: image, audio, and language**.
- The original paper proposed transformers for the task of **translating a sentence from one language to another**, similar to what Google Translate does when converting from, say, **English to Hindi**.
- A transformer is **a two-part neural network**. The first part is an 'encoder' that **ingests the input sentence in the source language (e.g. English)**; the second is a 'decoder' that **generates the translated sentence in the target language (Hindi)**.
- The encoder converts each word in the source sentence **to an abstract numerical form** that captures **the meaning of the word within the context of the sentence**, and **stores it in a memory bank**.
- Just like a person would write or speak, **the decoder generates one word at a time** referring to what has been generated so far and **by looking back at the memory bank to find the appropriate word**. Both these processes **use a mechanism called 'attention'**, hence the name of the paper.

(more ahead)

Cont'd

- A key improvement over previous methods is the ability of a transformer to translate long sentences or paragraphs correctly.
- The adoption of transformers subsequently exploded. The capital 'T' in ChatGPT, for example, stands for 'transformer'.
- Transformers have also become popular in computer vision: they simply cut an image into small square patches and line them up, just like words in a sentence. By doing so, and after training on large amounts of data, a transformer can provide better performance than CNNs.
- Today, transformer models constitute the best approach for image classification, object detection and segmentation, action recognition, and a host of other tasks.
- Transformers' ability to ingest anything has been exploited to create joint vision-and-language models that allow users to search for an image (e.g. Google Image Search), describe one, and even answer questions regarding the image.

What is 'attention'?



- Attention in ML allows a model to learn how much importance should be given to different inputs. In the translation example, attention allows the model to select or weigh words from the memory bank when deciding which word to generate next.
- While describing an image, attention allows models to look at the relevant parts of the image when generating the next word.
- A fascinating aspect of attention-based models is their ability for self-discovery, by parsing a lot of data. In the translation case, the model is never told that the word "dog" in English means "कुत्ता" in Hindi. Instead, it finds these associations by seeing several training sentence pairs where "dog" and "कुत्ता" appear together.
- A similar observation applies to image captioning. For an image of a "bird flying above water", the model is never told which region of the image corresponds to "bird" and which "water". Instead, by training on several image-caption pairs with the word "bird", it discovers common patterns in the image to associate the flying thing with "bird".

(more ahead)

Cont'd

- Transformers are **attention models on steroids**. They feature **several attention layers** both within the encoder, **to provide meaningful context across the input sentence or image**, and from the decoder to the encoder **when generating a translated sentence or describing an image**.

The billion and trillion scale



- In the last year, **transformer models have become larger and train on more data than before**. When these colossuses **train on written text**, they are called **large language models (LLMs)**. ChatGPT uses **hundreds of billions of parameters** whereas **GPT-4 uses hundreds of trillions**.
- While these models are **trained on simple tasks**, such as **filling in the blanks or predicting the next word**, they are **very good at answering questions, creating stories, summarising documents, writing code, and even solving mathematical word problems in steps**.
- Transformers are also **the bedrock of generative models** that create **realistic images and audio**. Their utility in diverse domains makes transformers a very powerful and universal model.
- However, there are some concerns. The scientific community is **yet to figure out how to evaluate these models rigorously**. There are also instances of **"hallucination"**, whereby **models make confident but wrong claims**. We must urgently address societal concerns, such as data privacy and attribution to creative work, that arise as a result of their use.
- At the same time, **given the tremendous progress, ongoing efforts to create guidelines in their use, and work on leveraging these models for positive outcomes** (e.g. in healthcare, education, and agriculture), one can surely be optimistic.

ASTR; govt's AI and face recognition tool to detect phone frauds



Relevance: Prelims & Mains Paper III; Science and Technology

Why in news?

- The Dept of Telecommunications (DoT) has developed an artificial-intelligence-based facial recognition tool.
- It is claimed to have the capability of running checks on subscriber databases of telecom operators to deduce whether it contains multiple connections associated with the same person.
- The DoT claims the tool — called Artificial Intelligence and Facial Recognition powered Solution for Telecom SIM Subscriber Verification (ASTR) — can potentially bring down cyber frauds by detecting and blocking possible fraudulent mobile connections.

Origins of ASTR

- In 2012, DoT had issued an order to all telecom operators that they would have to share their subscriber database including users' pictures with the dept.
- These images constitute the core database on which authorities are running their facial recognition algorithm using ASTR. The ASTR project was conceptualised and designed in 2021 by the DoT's unit in Haryana.
- A pilot project was launched in Haryana's Mewat region to test ASTR's feasibility. It is understood that before the ASTR pilot project, there were approximately 16.69 lakh SIMs in Mewat, of which close to 5 lakh SIMs across all telecom operators were detected to be fraudulent.

How ASTR works?

- Human faces in subscribers' images are encoded using convolutional neural network (CNN) models in order to account for the tilt and angle of the face, opaqueness and dark colour of the images.
- After that, a face comparison is carried out for each face against all faces in the database, and similar faces are grouped under one directory.
- Two faces are concluded to be identical by ASTR if they match to the extent of at least 97.5%. ASTR is capable of detecting all SIMs against a suspected face in less than 10 seconds from a database of 1 crore images.
- Once the faces are matched, ASTR's algorithm uses what it describes as "fuzzy logic" to find similarity or approximate matches for the subscriber names.
- To take a random example of a name, if one were to look up "Apple Inc.", the algorithm will produce related results including "Apple Incorporated", "Apple Park", "iPhone" etc. It also accounts for any typographical errors that might have occurred while the subscriber acquisition form was being filled.
- The DoT allows an individual to take nine legitimate mobile phone connections using a single identity proof. In essence, what the ASTR does is – 1) it looks up if there are more than nine connections against a single individual's photograph; 2) it runs a search through the database to see if the same person has taken SIMs under different names.
- In one case, ASTR had detected as many as 6,800 connections against the same image of the subscriber — that is, the same face, but different names. In another case, 5,300 connections were found to have been taken against a single image.

What happens next?

- Once the DoT has determined that a set of numbers have been obtained by people **through fraudulent means**, it shares **a list of those connections** with **telecom operators to block**.
- According to the Ministry of Communication, an analysis of **more than 87 crore mobile connections** was carried out using ASTR in the first phase, where **more than 40 lakh cases of people using a single photograph** to obtain mobile connections were detected. After “due verification”, **more than 36 lakh connections were discontinued** by telecom operators.
- The same list is also shared **with banks, payment wallets, and social media platforms** for disengaging these numbers from their respective platforms.
- **WhatsApp had “coordinated” with the Centre** in disabling accounts created using such numbers. The govt is working with **other social media platforms as well**.



WHO issues guidelines on non-sugar sweeteners



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The World Health Organization (WHO) issued new guidelines on May 15 **advising against the use of non-sugar sweeteners (NSS) like aspartame, saccharin, stevia and other derivatives as a “healthy” alternative to sugar.**
- In its ‘conditional’ guideline, WHO says **non-sugar sweeteners should not be used as a means of achieving weight control or reducing risk of diet-related non-communicable diseases.**
- The spotlight on NSS intensified after 2015, when the WHO had said that **high intake of free sugars** is linked to **weight gain** and **obesity**, leading consumers to **turn to NSS as an alternative.**

What are non-sugar sweeteners?

- **Non-sugar sweeteners (NSS)** are marketed **as low or no-calorie alternatives to free sugars** which aid in weight loss, and in **controlling blood glucose** in individuals with **diabetes.**
- NSS categories studied by WHO include **acesulfame K, aspartame, advantame, cyclamates, neotame, saccharin, sucralose, stevia, and stevia derivatives.**
- **Aspartame** is popularly used to **sweeten diet colas that claim to have ‘no sugar, no calories.’** **Saccharin** is used to **sweeten tea or coffee.**

Basis of these findings

- The WHO analysed **a total of 283 studies** on the intake of NSS in adults and children. The outcome of the trials was that **they noted 'higher intake' of NSS was associated with a 76% increase in risk of obesity and a 0.14 kg/m² increase in BMI (Body Mass Index).**
- The WHO warned that **long-term use of NSS** could lead to **increased risk of Type 2 diabetes, cardiovascular diseases, chronic kidney disease and cancer.**
- As per medical experts, **more studies are required** because currently the evidence cited by the WHO on non-sugar sweeteners has been categorised into **either moderate, low or very low certainty.**
- Moderate certainty indicates that **WHO is moderately confident about the risks** and that **the true effect is likely to be close to the estimate, but there is a possibility that it is substantially different.**

Raises concerns!

- Health experts point out that **India should take necessary steps to guide people on non-sugar sweeteners** because **one in nine women and one in 25 men are obese**, according to the latest National Family Health Survey.
- **Obese people are more prone to suffer from diabetes. There are an estimated 25 million people living with pre-diabetes in India, according to WHO data.**
- As per a doctor, **for every three young patients** who are **Type 1 diabetic** (at birth due to genetic factors), there is **one patient under 25 years** who has **diabetes** due to **lifestyle and diet-related causes**. He adds **those who are obese in their teenage years and diabetic in their twenties** have a higher chance of getting heart attacks in their thirties and forties.
- Meanwhile, according to a food industry player who adds artificial sweeteners to the ice-creams sold by the company, **developing products that have no added sugar but taste as sweet with similar sweetness is a priority.**
- However, doctors point out that **non-sugar sweeteners** are known to have **an effect on the gut and bones** and that **they cause bloating.**

WHO's nutritional advice

- The WHO says it is difficult to view the role of NSS in isolation when it comes to weight loss studies that were analysed, so **it is important to note that the quality (nutritional profile) and quantity of diet** are also crucial in this matter.
- It recommends **having alternative foods which are minimally processed, unsweetened foods and beverages.**
- While analysing studies, WHO has found that weight loss in certain subjects **cannot entirely be attributed to switching from sugars to NSS**, as it also depended on **having a reduced portion size or energy intake of food.**

What happens next?

- As per health experts, **the Ministry of Health** will have to **initiate discussions among policy-makers** before it decides to adopt this 'conditional' recommendation **as a national policy.**
- The WHO recommends that with the help of this guideline, efforts should be made, with a focus on youngsters, to change taste preferences and eating behaviours.

Rayyanah Barnawi becomes the first Arab woman astronaut to go to space



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- Rayyanah Barnawi recently became the first Arab woman astronaut to go into space. She is a part of **Axiom Space's private mission** to the **International Space Station (ISS)**.
- Barnawi has gone on this mission **along with a fellow Saudi - Ali Al-Qarni, a fighter pilot**.
- Barnawi is part of a team which has **travelled to the ISS in a SpaceX Falcon 9 rocket** from the Kennedy Space Center at Cape Canaveral in Florida, USA.
- The group will stay aboard the space station for around eight days to carry out a variety of experiments.

Who is Rayyanah Barnawi?

- Born in 1988 in Jeddah, Saudi Arabia, Barnawi is **a biomedical researcher** with almost **a decade of experience in cancer stem-cell research**. She has **multiple degrees in biomedical sciences**.
- Barnawi has spent over nine years as a research lab technician.



Ali Al-Qarni (left) and Rayyanah Barnawi (right) in the background

Axiom Space's private mission

- Called Axiom Mission 2, or Ax-2, this is **the second private mission** by **Axiom Space, an American privately funded space infrastructure manufacturing company** that was co-founded by Michael Suffredini, who served as NASA's International Space Station Program Manager from 2005 to 2015.
- As part of the latest mission, Barnawi and her other crew members will conduct **about 20 science and technology experiments**, covering various areas such as **human physiology, cell biology, and technology development**.
- As per Axion, "Data collected in-flight will impact understanding of human physiology on Earth and on-orbit, as well as establish the utility of novel technologies that could be used for future human spaceflight pursuits and humankind on Earth".
- Barnawi, whose name for the mission was announced by the Saudi Space Commission earlier this year, will be working **on stem cell and breast cancer research**.

Saudi Arabia and Space Exploration



- Although Barnawi is the first Saudi woman to reach space, **she isn't the first Saudi to go there**.
- The first Saudi national to arrive in space was **Prince Sultan ibn Salman Abd al-Aziz Al Saud**, who was part of **a US-organised space voyage** that took place in **1985**.
- In a bid to make a name for itself in the field of space exploration, the country, **in 2018, established its first space agency, the Saudi Space Commission**.
- Barnawi's journey to the space station, however, is not just a part of Saudi Arabia's attempt to become a dominant player in astronomy and cosmology. It also wants to **shed its image of being an ultraconservative country that doesn't treat women as equal to men**.

Apple gearing up to launch mixed-reality headset - Reality Pro



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- In a few weeks from now, Apple is expected to reveal what is internally called the company's "riskiest" ever offering!
- It refers to **a mixed-reality headset** called **Reality Pro** that could help Apple lay the ground for **replacing the smartphone** as **the default portable computer** for millions of users.
- While Apple has not talked about the product publicly, it's expected to be revealed in the keynote which will kick off **this year's World Wide Developer Conference (WWDC)** on June 5. A possible release date later in the year may also be announced at this event.
- Notably, at its annual developer conference, Apple introduces updates to its mobile operating systems for the iPhone and iPad and occasionally shows off new hardware.

Reality Pro details

- Apple's first headset will be **a mixed-reality headset**. **Mixed reality or MR specifically**, involves **the blending of real and virtual worlds**. Put simply, the MR experience viewed in the head-mounted display **combines aspects of both virtual reality (VR) and augmented reality (AR)**.
- The idea is to **connect real environments to completely virtual ones**. Meta's Quest Pro, a \$1000 headset, is also based on mixed-reality technology.
- Mixed reality headsets capture **the physical environment using multiple cameras built into the headset**. This see-through technology **when combined with algorithms**, reconstructs **a stereoscopic view of the world** and **displays it on opaque screens**.

Appearance

- Reality Pro which has been **seven years in the making** — is reportedly different from how the company initially envisioned the device to be.
- Rather than sleek eyeglasses designed to be worn all day, similar to prescription specs and the **now discontinued Google Glasses**, Reality Pro will **resemble ski goggles**.
- So, it is unlikely to be different from other headsets currently on the market but expect the headset to have the DNA of Apple's design and aesthetics.

A Standalone device



- Reality Pro will be **a standalone device**, meaning **it doesn't need to be connected to a separate box to power them**.
- It will be **a fully-functional wearable computer strapped onto one's face**, with **Apple's M2 chipset** powering the headset. **Meta's Quest Pro** and **HTC's VR XR Elite** are **also standalone headsets**.
- However, as per reports, the headset's external battery pack is designed to **sit in the user's pocket during use**. That means the headset has to be attached to **a MagSafe-style external battery pack** to be fully operational.
- A fully charged pack is said to offer about **just two hours of use**.



Loaded with cameras, features and apps

- Reality Pro is said to use external cameras to pass through video of the real world to the wearer much like Meta's Quest Pro.
- In fact, the headset will apparently use 14 cameras. The extra cameras will be used to track the user's face so that Apple's virtual avatars will accurately represent faces and mouth movements in virtual reality experiences.
- Apple will reportedly offer users multiple ways to use the mixed-reality headset. The device will offer a host of features and applications, from games to immersive fitness programmes to the ability to use iPad apps like Books, FaceTime, and Maps in virtual reality.

A hefty price!

- Apple is expected to release Reality Pro at the price of \$3,000. That would be triple the price of the Meta's Quest Pro.
- The reason for such a high price could be due to high manufacturing costs and years of investment in R&D. A recent report claims that Apple will be selling the headset at cost.
- Looking at the returns in the short run, Apple has reportedly revised sales estimates down from 3 million a year to 900,000 a year.

AI Supercomputer 'AIRAWAT' puts India among top supercomputing league



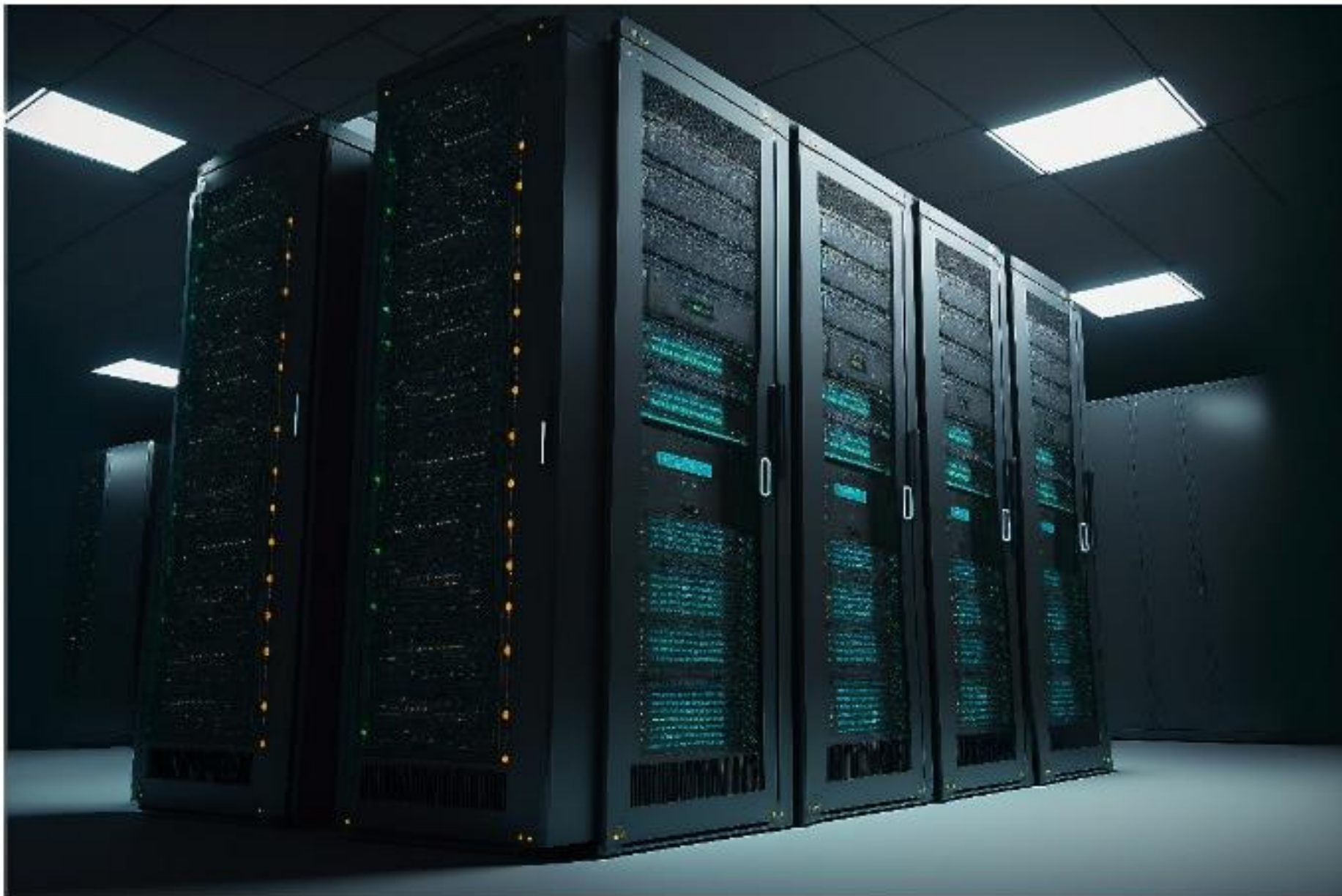
Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The AI Supercomputer 'AIRAWAT', installed at C-DAC, Pune has been ranked 75th in the world.
- It was declared so recently in the 61st edition of Top 500 Global Supercomputing List at the International Supercomputing Conference (ISC 2023) in Germany.
- It puts India on top of AI Supercomputing nations worldwide. The system is installed under National Program on AI by the Government of India.

AIRAWAT's specifications

- As per the Ministry of Electronics & Information Technology (MeitY) - "the AIRAWAT's computing capacity is 200 AI Petaflops. This computing capacity can be integrated with the computing capacity of PARAM Siddhi. The total computing capacity turns out to be 210 AI Petaflops.
- 210 AI Petaflops gives a total peak compute of 410 AI Petaflops Mixed Precision and sustained compute capacity of 8.5 Petaflops (Rmax) Double Precision. The peak compute capacity (Double Precision, Rpeak) is 13 Petaflops".
- Notably, MeitY has already taken steps to scale AIRAWAT to 1,000 AI Petaflops Mixed Precision compute capacity to cater to the current AI computational needs.
- In computing, floating point operations per second (FLOPS, flops or flop/s) is a measure of computer performance. A 1 petaFLOPS (PFLOPS) computer system is capable of performing one quadrillion (10^{15}) floating-point operations per second.



Research on Axolotl mutant gives scientists hope to regenerate lost body parts

Relevance: Prelims & Mains Paper III; Science & Technology

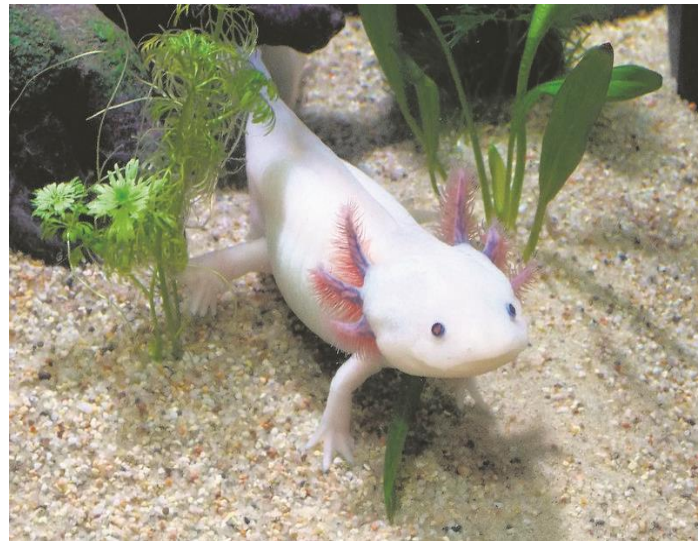


Why in news?

- For the past few years, a small number of scientists have been studying how Mexican axolotl (*Ambystoma mexicanum*), a species of salamander quickly regenerates lost limbs, gills, tail, their eyes, and even parts of its head.
- By understanding this, we humans might gather clues on how to increase our own chances of doing the same.

What is axolotl?

- The axolotl is a species of salamander (lizard-like amphibians) originally found in Lake Xochimilco, near Mexico City. Sadly, they are now almost extinct in the wild. Their gene pool survives among individuals bred in captivity for the pet trade and for aquaria.
- Even though they are amphibians, axolotls remain aquatic throughout their lives.



Researchers come up with a new artificial light-harvesting system



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

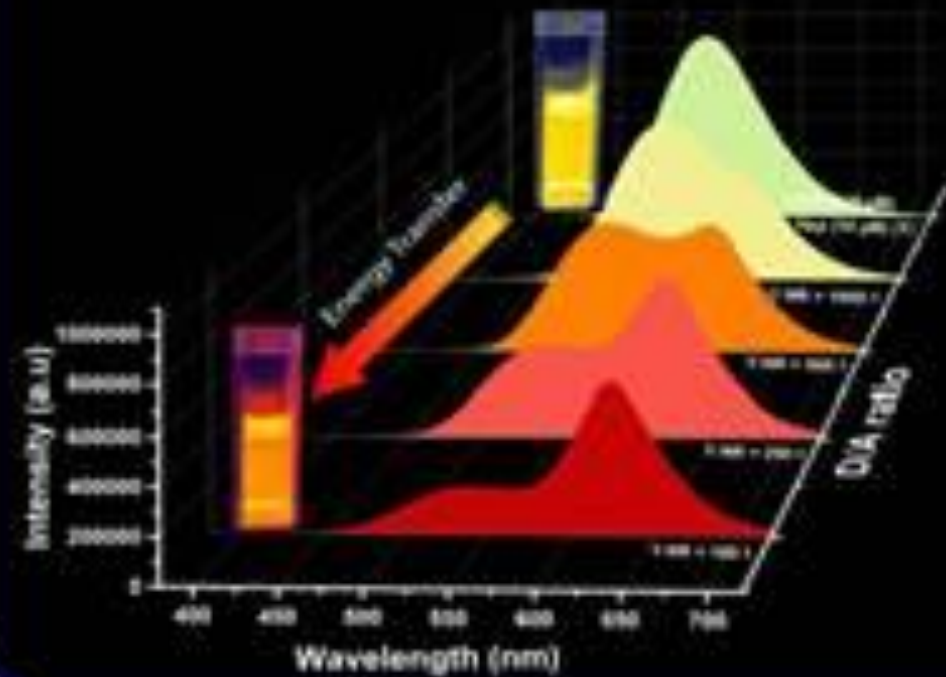
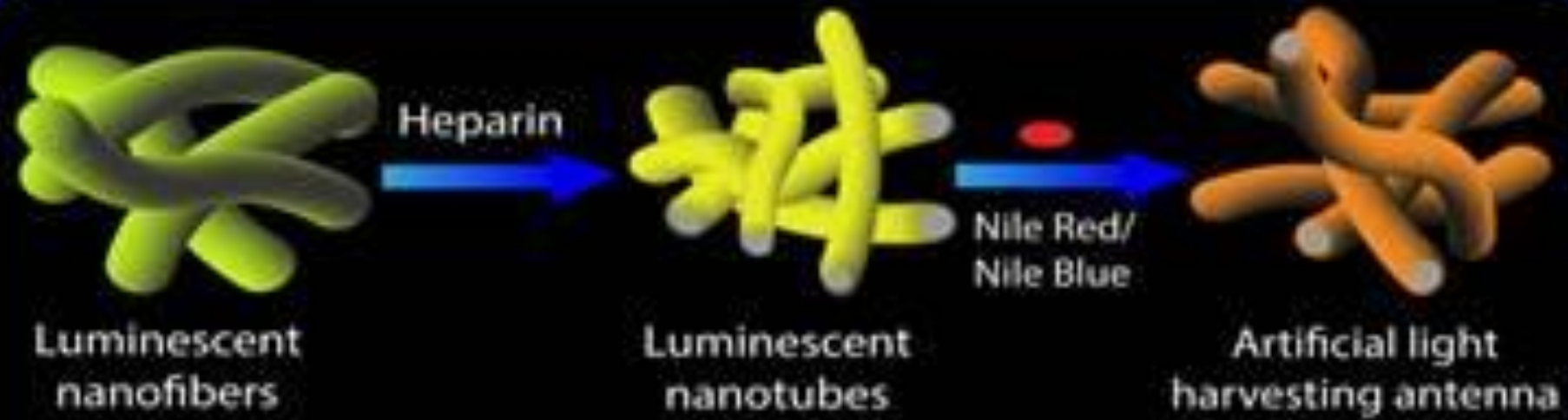
- Inspired by **natural photosynthetic systems**, researchers have developed a new method of harvesting artificial light using **organic nanotubes**.
- It can be utilized in **solar cells, photocatalysis, optical sensors**, and **tunable multi-color light-emitting materials**.

Concept

- In nature, **plants** and **photosynthetic bacteria** capture **sunlight** and deliver it to the reaction center through **a cascade of energy** and **electron transfer steps** for its eventual storage in the form of **chemical energy**.
- The **antenna chromophores** in the light-harvesting complexes are **precisely aligned into arrays** by the surrounding proteins, which in turn allows **the energy migration** between them in a highly efficient manner.
- Mimicking **natural photosynthetic systems** and **understanding the fundamental processes of energy transfer** have gained enormous interest in recent years, especially **for systems** that need **energy conversion** and **storage**.

Experiments details

- Scientists from **top Indian institutes** carried out experimental and computational investigations on **artificial light-harvesting in organic nanotubes** derived from the union of **an organic fluorescent molecule** and **a therapeutically important biopolymer**.
- The former is **an amphiphilic cationic molecule** called **cyano stilbenes** while the latter is **an anionic therapeutically important bio-polymer** called **heparin**.
- Just like the **antenna chromophores** or **pigmented (coloured) membrane-associated vesicles** used to perform photosynthesis in bacteria, the **nanotubes** acted as **highly efficient energy donors (antennae)** in a system that mimicked the natural photosynthetic process.
- They donated energy to **acceptor dyes** such as **Nile Red** and **Nile Blue**, resulting in emission color turning from **initial greenish-yellow** to **orange-red**, including **white light**.
- The energy transfer phenomenon demonstrated in this study is known as **FRET (Förster resonance energy transfer)**, which has significant importance in different applications such as the **determination of DNA/RNA structures**, **mapping biological membranes**, **real-time PCR tests**, and **so on**.
- The future is moving towards the **conversion of solar energy for storage** as **chemical** or **electrical energy**, and the **process of energy transfer** is a key factor for such applications.



SOCIAL ISSUES

Spurious liquor kills over 20 in Tamil Nadu

Relevance: Prelims & Mains Paper I; Social Issues



Why in news?

- Recently, as many as 22 people had died after consuming spurious liquor in the Chengalpattu and Villupuram districts of Tamil Nadu. More than 30 others were still being treated in hospitals.
- The incidents occurred barely a month after the State govt said that it had brought such deaths under control.
- These deaths are also surprising because liquor sales in Tamil Nadu are wholly controlled by the State, via more than 5,300 outlets.
- The State govt is currently in the process of closing 500 outlets.

What is the alcohol in liquor?

- Liquor is differentiated by its alcohol content — from the 5% or so of beer to the 12% or so of wine to the 40% or so of distilled spirits (all by volume).
- In the beverages consumed for recreational purposes, the alcohol in question is almost always ethanol. Technically, in this context, ethanol is a psychoactive drug that, in low doses, reduces the level of neurotransmission in the body, leading to its typical intoxicating effects.
- Contrary to popular belief, the World Health Organization has found that “no level of [its] consumption is safe for our health”. Long-term use leads to dependence, heightens the risk of some cancers and heart disease, and may eventually cause death.
- Ethanol (C_2H_5OH) is one carbon atom bonded to three hydrogen atoms and one more carbon atom which is also bonded to two hydrogen atoms and the hydroxyl group, also known as the ion OH^- .
- Inside the body, it is metabolised in the liver and the stomach by alcohol dehydrogenase (ADH) enzymes to acetaldehyde. Then aldehyde dehydrogenase (ALDH) enzymes transform the acetaldehyde into acetate. The adverse effects of alcohol consumption, from the hangover to a cancer, are due to acetaldehyde.

What is spurious liquor?

- Spurious liquor is characterised by the liquid mixture containing methanol as well. The police have thus far determined that the spurious liquor in both the aforesaid incidents in TN arose from the same source, and that arrack sellers had purchased industrial-grade methanol from factories and sold it to the victims. (Arrack is distilled from the fermented sap of the palm tree.)
- In many older cases, such liquor is typically a home-made liquor, such as arrack, to which methanol was added to strengthen the intoxicating effects and/or to increase its bulk volume.
- The Food Safety and Standards (Alcoholic Beverages) Regulations 2018 stipulate the maximum permissible quantity of methanol in different liquors. These values span a wide range, including “absent” in coconut fenny, 50 grams per 100 litres in country liquor, and 300 grams per 100 litres in pot-distilled spirits.

What is methanol?

- The methanol molecule (CH_3OH) consists of one carbon atom bonded with three hydrogen atoms and one hydroxyl group.
- The most common way to produce methanol is to combine carbon monoxide and hydrogen in the presence of copper and zinc oxides as catalysts at 50-100 atm of pressure and 250°C .
- Methanol has several industrial applications, including as a precursor to acetic acid, formaldehyde, and aromatic hydrocarbons. It is also used as a solvent and as antifreeze.

How does spurious liquor kill?

- The deadliness of spurious liquor **arises from methanol**. As per an expert, **in every hooch tragedy in the history of India — and of the world since 1945 — the poison has been methanol**.
- The human body contains infinitesimal quantities of methanol (4.5 ppm in the breath of healthy individuals) as a result of eating some fruits. **But even for an adult, more than 0.1 ml of pure methanol per kilogram of body-weight can be devastating**.
- Once ingested, methanol is metabolised in the liver by ADH enzymes **to form formaldehyde (H-CHO)**. Then ALDH enzymes convert formaldehyde to **formic acid (HCOOH)**. Its accumulation over time leads **to a deadly condition** called **metabolic acidosis**. Acidosis can lead to **acidemia**, a condition wherein **the blood's pH drops below its normal value of 7.35, becoming increasingly acidic**.
- Formic acid also interferes with an enzyme called cytochrome oxidase, which in turn **disrupts cells' ability to use oxygen** and leads to the **build-up of lactic acid**, contributing to **acidosis**.
- Consuming methanol also leads to **methanol-induced optic neuropathy** ..., a serious condition **that may result in long-term or irreversible visual impairment or even blindness** [due to] damage and loss of function of the optic nerve and retina.
- Methanol-poisoning can also cause **cerebral edema, haemorrhage, and death**.

Treatment

- Once methanol is ingested, the body takes some time to completely eliminate it. One estimate suggests that **as much as 33% is still left behind after 48 hours**.
- It is completely absorbed via the gastrointestinal tract and the blood-methanol level can reach its maximum value within 90 minutes. There are two immediate ways to treat methanol poisoning. One is to **administer ethanol** (of a pharmaceutical grade, by healthcare workers). This may sound counter-intuitive but **ethanol competes very well with methanol for the ADH enzymes**. As a result, the methanol is **kept from being metabolised to formaldehyde**.
- The other option is to administer **an antidote** called **fomepizole**, which has a similar mechanism — **it slows the action of the ADH enzymes, causing the body to produce formaldehyde at a rate that the body can quickly excrete, preventing the deadlier effects from kicking in**.
- While Fomepizole is expensive, pharmaceutical-grade ethanol needs to be administered under supervision.
- Healthcare workers may also require an individual undertake a dialysis to remove methanol and formic acid salts from the blood, and mitigate damage to the kidneys and retina. They may also administer **folinic acid**, which encourages the formic acid to break up into carbon dioxide and water. **Both fomepizole and folinic acid are in the WHO's list of essential medicines**.
- If the individual **consumed ethanol along with the methanol**, the damage **may not be evident** until after a few days, **further delaying treatment and increasing mortality**.

Calls grow across the world to end “Tampon Tax”



Relevance: Prelims & Mains Paper I; Social Issues

Why in news?

- More than a quarter of menstruating women and girls around the world – some 500 million people – struggle to manage their periods, often because they cannot afford sanitary pads, according to the World Bank.
- Concern about “period poverty” has fuelled campaigns globally calling for the end of the so-called tampon tax, which refers to consumption levies such as value-added tax (VAT) that most countries charge on items such as sanitary pads, tampons, panty liners and menstrual cups.
- In some countries, period products are considered non-essential items for VAT purposes, while items including toilet paper, condoms and over-the-counter medicines are tax-free or carry a lower levy.

Countries that have abolished the tampon tax

- Since Kenya became the first country to scrap VAT on sanitary pads and tampons in 2004, at least 17 countries have followed suit.
- Among the latest countries to pass laws to abolish the tampon tax are Mexico, Britain and Namibia.
- Another 10 countries have designated sanitary products as tax-exempt goods or have exempted the tax on imported raw materials used to make them.
- Advocates against period poverty usually campaign for sanitary products to be zero-rated for VAT, as this means producers can also claim back taxes on raw materials, making the final product truly tax-free.
- Although Tanzania and Nicaragua had also scrapped the tax on period products, both countries reintroduced it in 2019.

(more ahead)

Reasons why some countries aren't scrapping tampon taxes

Cont'd

- In Europe, 17 countries have reduced the VAT on sanitary products, with Italy the latest to do so this year.
- The European Union last year revised a directive that previously only allowed member states to reduce VAT on sanitary products by 5%. The change means nations can now apply lower tax rates to some goods.
- In tampon tax pioneer Kenya, free distribution of period products in schools is included in the annual budget, though campaigners say the supply is patchy.
- Elsewhere in Africa, free pads are provided to schoolgirls in South Africa, Botswana and Zambia.
- VAT is an important source of revenue for govts – and the reason why many countries still have a tampon tax.
- In countries belonging to the Organisation for Economic Co-operation and Development (OECD), VAT revenue represented 6.7% of their gross domestic product (GDP) in 2020.
- VAT rates vary widely from country to country – from 5% in Canada to up to 27% in Hungary – and govts often have different definitions of what is considered an essential good that is exempted from the levy.
- In nearly two dozen U.S. states, menstrual products still carry a general sales tax (GST) similar to VAT that is levied on all consumer goods and services.
- Meanwhile, several other U.S. states have no such levy.
- Advocates also say that in countries where menstruation remains a taboo subject, lawmakers and policymakers show little interest in starting debate about the affordability of period products.

Growing momentum!

- In the U.S., advocates said there is **growing political will** to **remove the sales tax** in states **where it is still imposed** such as **Texas**, where a bill to scrap it **won preliminary approval** in March.
- From **Chile** to the **Czech Republic**, there are ongoing efforts to **slash the tax**, as well as **bills to distribute free products** in **schools**, such as the **Dignified Menstruation Law** in **Mexico**.
- Some women's rights advocates say the distribution of free pads may ultimately be **the only way** to **ensure access to period products**.
- In **2022**, **Scotland** became **the first nation** to make **tampons** and **sanitary pads free** and **available at designated public places** such as **community centres**, **youth clubs** and **pharmacies**.

INTERNAL SECURITY

Long-running Kuki-Meitei divide again flares up violence in Manipur



Relevance: Prelims & Mains Paper III; Internal Security

Why in news?

- Manipur is currently witnessing major violence between the Kuki-Zomi tribals and the largely Hindu Meiteis. Though there is a long history of conflict between the two, this is the first time in three decades that there has been a direct clash between the two ethnic groups.
- In 1993, Hindu Meiteis clashed with Pangals (Muslims). Then there was horrific violence involving the tribal Nagas and Kukis which saw more than a hundred Kukis massacred in a single day, and thousands driven from their homes.

Cultural geography

- There are 16 districts in Manipur, but the state is commonly thought of as divided into 'valley' and 'hill' districts.
- Today's valley districts of Imphal East, Imphal West, Thoubal, Bishnupur, and Kakching were part of the erstwhile kingdom of Kangleipak, ruled by the Ningthouja dynasty.
- As per historians, the tribal areas outside the valley were also part of the kingdom, but this is disputed by the tribes, in particular the Naga tribes.
- The Manipur valley is encircled by low hills that spread into Nagaland and Mizoram. In these hill areas, which comprise the bulk of Manipur's geographical area, live 15 Naga tribes and the Chin-Kuki-Mizo-Zomi group. They include the Kuki, Thadou, Hmar, Paite, Vaiphei and Zou peoples.
- The Kangleipak kingdom, then a British protectorate, was repeatedly raided by Naga tribes. The British political agent in Manipur is believed to have brought the Kuki-Zomi from the Kuki-Chin hills of Burma to protect the valley from plunder by acting as a buffer between the Meiteis and the Nagas.
- The Kukis, like the Nagas, were fierce headhunting warriors — and the Maharaja gave them land along the ridges, where they could act as a shield for the Imphal valley below.

The Kuki-Meitei divide

- Ethnic tensions between the hill communities and the Meiteis which have existed from the time of the erstwhile kingdom started escalating with the beginning of the Naga national movement in the 1950s, and the call for an independent Naga nation.
- The Naga insurgency was countered by the rise of insurgent groups among the Meiteis and Kuki-Zomi.
- In the 1990s, as the NSCN-IM pushed harder for self-determination, the Kuki-Zomi groups began to militarise, and the Kukis launched their own movement for 'Kukiland'. However, unlike the Naga movement, the Kuki-Zomi demand was for a state within India, not a separate national homeland.
- Even though the Kukis had started out as protectors of the Meitei people, the Kukiland demand created a rift between the communities.
- During the Naga-Kuki clashes of 1993, NSCN-IM cadres allegedly went from village to village in areas they claimed as belonging to Nagas, emptying them of Kuki residents.
- Many Kukis fled to Churachandpur, a district dominated by the Kuki-Zomi people. Analysts have pointed out that the cornering of Kukis in broadly one district increased their sense of insecurity.

Meitei fears



- The Naga and Kuki movements fuelled Meitei nationalism leading to the formation of numerous groups in the valley. There were **demands for Scheduled Tribe status for Meiteis**.
- In 2001, the Indian govt's decision to extend its ceasefire with the Nagas to states other than Nagaland led to widespread violence in Manipur.
- In Imphal, protesters set the Assembly building on fire. The demand for ST status became a mass movement from this point onward, as an increasingly insecure Meitei population feared the possible creation of Greater Nagalim would lead to shrinking of Manipur's geographical area.
- During the period 2006-12 came the demand for an Inner Line Permit (ILP) in Manipur, which would bar outsiders from entering the state without permission.
- The free movement of the Kuki-Zomi across Manipur's porous border with Myanmar **increased fears of demographic change**. Notably, communities belonging to this group of tribes have strong links in terms of ethnicity, customs, language, and dress.
- The Federation of Regional Indigenous Societies, which spearheaded the ILP demand in 2006, claimed that the growth rate of Manipur's population had jumped from 12.8% in the 1941-51 period to 35.04% during 1951-61 and to 37.56% in 1961-71 after the permit system was abolished.
- The Meiteis argue that reservation for STs in govt jobs amounts to an unfair advantage. They also point out to the fact that while tribals can buy land in the valley, Meiteis are prohibited from buying land in the hills.

The recent unrest

- In 2020, as the Centre began the first delimitation process in the state since 1973, the Meitei community and its leaders **alleged that the Census figures used in the exercise did not accurately reflect the population break-up.**
- Tribal groups on the other hand said they had grown to 40% of the state's population, and were underrepresented in the Assembly.
- The 2021 coup in Myanmar and the following widespread unrest has led to **a refugee crisis in India's Northeast. Meitei leaders have alleged that there has been a sudden mushrooming of villages in Churachandpur district.**
- Notably, Chief Minister N Biren Singh has also pointed to the presence of Myanmar people in Churachandpur, and linking them to the cultivation of poppy, and repeatedly making references to "foreigners" and "outsiders".



Tahawwur Rana, the Pakistani-Canadian 26/11 attacks plotter to be extradited to India

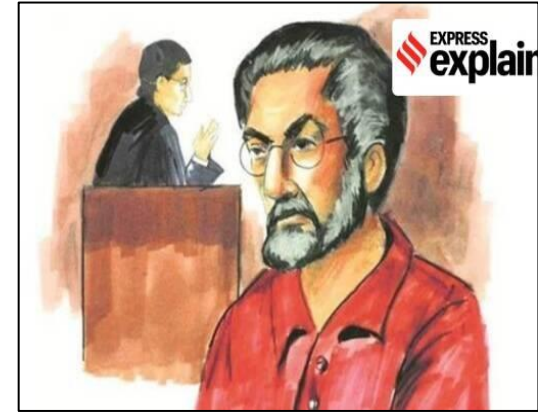
Relevance: Prelims & Mains Paper III; Internal Security

Why in news?

- A US court has approved the Indian govt's request for the extradition of Tahawwur Rana, the Pakistan-born Canadian man who faces charges for his role in the 26/11 Mumbai terror attacks in 2008 and **is known to be associated with David Headley**.

Who is Tahawwur Rana?

- Rana, who is **now 62 years old**, was **a childhood friend of Headley**. **Headley, a US citizen who was born to an American mother and a Pakistani father**, was arrested in Oct. 2009 by US authorities and **sentenced to 35 years in prison** for **his involvement in the Mumbai attacks**.
- As per the US govt, "Headley was convicted of conspiracy to bomb public places in India; conspiracy to murder and maim persons in India; six counts of aiding and abetting the murder of U.S. citizens in India; conspiracy to provide material support to terrorism in India..."
- Rana and Headley were schoolmates in Pakistan. After a stint as a doctor in the Pakistan Army, Rana moved to Canada, and was eventually granted Canadian citizenship.



Rana's role in the 26/11 attacks

- Rana later went on to establish a consultancy firm called **First World Immigration Services** in Chicago, USA. It was a branch of this business in Mumbai that provided Headley with the perfect cover to identify and surveil potential targets for the Pakistani terror group Lashkar-e-Taiba (LeT).
- In the 26/11 attacks, on Nov. 26, 2008, 10 LeT terrorists stormed into Mumbai. For three consecutive days, the city was in the grip of terror. Major landmarks like the Taj hotel and the Chhatrapati Shivaji Terminus railway station were attacked. The violence claimed the lives of 166 people, including foreigners. Pakistani nationals who carried out the attacks reached India via boats, it was later found.
- During court hearings, the US govt attorneys argued that Rana was aware that Headley was involved with the LeT and that by assisting him and affording him cover for his activities, he was supporting the terrorist organisation and its associates.
- Rana was arrested by American police soon after Headley's arrest at Chicago airport in Oct 2009.
- He was convicted in Chicago in 2011 of providing material support to the LeT for the India attack and for supporting the never-carried-out plot to attack a Danish newspaper named Jyllands-Posten that printed cartoons of the Prophet Muhammad in 2005. The plan (dubbed the "Mickey Mouse Project" by al-Qaeda) was in revenge for publishing a cartoon of Prophet Muhammad, but was never carried out.
- However, jurors in the US cleared Rana of a more serious charge of providing support for the attacks in Mumbai.

(more ahead)

Cont'd

- As per Rana's lawyer, he had been duped by Headley, who plotted the attacks. The defense called Headley the govt's chief witness, who testified to avoid the death penalty, a habitual liar and manipulator.
- They said that while the men had been old friends, Headley had a history of selling out friends and associates in order to escape with light prison sentences. The US govt's Department of Justice also noted in 2013 that Headley's cooperation with authorities was a factor in why he was not sentenced to life imprisonment.
- It was Headley's testimony as a government witness at Rana's trial in Chicago that led to Rana being sentenced to 14 years in prison, followed by five years of supervised release. In 2013, Headley entered into a plea bargain with prosecutors in exchange for a reduced 35-year sentence, but Rana did not.
- In 2016, Headley claimed that he had informed Rana of his activities only a few months before the attacks in Nov. 2008.
- Rana's chief concern, Headley claimed, had been that no terror activities should be conducted from the company's office in Tardeo in central Mumbai. Rana also provided financial support to Headley, paying him multiple times in 2006.

India's extradition request



- In 2021, the Biden administration urged a federal court to certify India's request for extradition of Rana. A federal US court in Los Angeles ruled that Rana met all criteria to be extradited to India for his trial.
- Earlier in 2011, India's National investigation Agency (NIA) had filed a chargesheet against nine people including Rana, Headley, Hafiz Saeed and Zaki-ur-Rehman Lakhvi of the LeT, al-Qaeda operative Ilyas Kashmiri, and several Pakistan Army officials for planning and executing the attack.
- In 2014, a Sessions Court in Delhi issued fresh non-bailable warrants against the nine men whom the NIA had listed as being absconding.

DISASTER MANAGEMENT

Neurotoxic gas leak in Ludhiana causes 11 deaths

Relevance: Prelims & Mains Paper III; Disaster Management

Why in news?

- Recently, 11 people died while four fell ill and were hospitalised due to a gas leak in the Giaspura area of Ludhiana, Punjab. No definitive reasons for the leak are known so far.
- According to the **air quality sensors** used by **National Disaster Response Force (NDRF) team**, **high levels of Hydrogen Sulphide gas, a kind of neurotoxin**, have been detected.
- It is being determined how this gas might have led to the incident.

What exactly happened?

- Giaspura has several factories and is a thickly-populated area. It is suspected that **poisonous gas may have originated from a partially open manhole in the locality** and spread to the shops and houses nearby.
- It is suspected that some **acidic waste** was thrown into the sewer **which reacted with methane, carbon monoxide and other sewerage gases to produce hydrogen sulphide**.
- Notably, **Hydrogen sulphide is so toxic that even one breath of it taken inside can kill a person**.



What are neurotoxins?

- Neurotoxins are poisonous substances which can directly affect the nervous system.
- Neurotoxicity occurs when exposure to natural or man-made toxic substances alters the normal activity of the nervous system.
- These substances can eventually disrupt or even kill neurons or nerve cells, which are important for transmitting and processing signals in the brain and other parts of the nervous system.
- They directly attack the respiratory tract of the body, thereby overpowering the oxygen concentration of the body and then the nervous system as well.

What are neurotoxic gases?

- Methane, hydrogen sulphide, carbon monoxide and carbon dioxide are common neurotoxic gases, While methane and carbon monoxide are odourless gases, hydrogen sulphide has a pungent odour and in higher concentration it can be fatal for humans.
- In the present case, it is likely that a chemical might have reacted with methane gas that is naturally generated during the breakdown of human waste. Samples of sewage were taken from nearby manholes to assess this.
- To remove gases such as hydrogen sulphide from wastewater, chemical oxidation is done, where oxidants such as hydrogen peroxide are added to the wastewater.

Covid-19 no longer a global health emergency, says WHO



Relevance: Prelims & Mains Paper III; Disaster Management

Why in news?

- The World Health Organisation (WHO) has announced that **Covid-19 is no longer a Public Health Emergency of International Concern**, and that the focus **would now be on the long-term management of the infection**.
- The novel viral infection came to light after **China reported a cluster of pneumonia cases with no known cause from Wuhan on Dec. 31, 2019**. By the end of Jan. 2020, nearly 10,000 cases had been reported, including more than 100 cases in 19 other countries.
- WHO raised **its highest level of alert** and **termed the infection a Public Health Emergency of International Concern**, a designation that **remained in place for over three years**.

Why was Covid-19 declared a pandemic?

- **SARS-CoV-2 was a novel virus about which very little was known in the initial days**. Later, as many patients reached hospitals with pneumonia and in need of oxygen support, doctors and researchers discovered that the infection put the immune system into overdrive.
- This resulted in immune cells starting to attack the patient's own organs. This tended to happen more in the elderly and in those with existing comorbidities like diabetes.
- As per medical experts, there are **three conditions** for declaring a disease a public health emergency -
 - **It is spreading across several countries**
 - **It is leading to serious illness, hospitalisations and deaths**
 - **It is causing serious stress on health systems**
- **Covid-19 fulfilled all three conditions in 2020 and 2021.**
- **India has reported 4.43 crore cases and 5.3 lakh deaths due to Covid-19 so far. Globally, the number of infections has crossed 76.5 crore, and caused 69.2 lakh deaths.**

Reasons behind WHO's decision

- Over the last three years, doctors and researchers have figured out methods of transmission; who are at highest risk of severe disease and death; better, cheaper, and point-of-care diagnostics; a treatment protocol that works; medicines to prevent viral replication that can help in reducing severity of the disease; and most importantly, vaccines that can prevent severe disease.
- Govts have strengthened healthcare systems and rolled out vaccination drives.
- In India, more than 90% of people above the age of 12 years have received their two primary doses. Since many were infected and vaccinated, the population has developed a 'hybrid immunity' that has been shown to offer better protection against future severe diseases.
- Omicron was more infectious (transmitting quickly) but less virulent (causing milder disease). This was because the virus changed to become less dangerous but also because people acquired immunity.
- Health systems are no longer stressed; focus is back on non-Covid conditions that were neglected during 2020 and 2021.
- So, for much of 2022 and now 2023, Covid-19 did not satisfy the three conditions for a disease to be a public health emergency.

Covid Scenario in India till now

- India witnessed **three distinct waves of Covid-19 infections**. The **first wave, from mid-2020 to around Sept.** of that year, was caused by the original variant. Testing increased from just one laboratory in Pune to hundreds of centres across the country.
- **The second wave in April-May 2021 saw a large number of cases and deaths over a short period.** The surge was driven by **the Delta variant that led to deep lung impact and resulted in hospitals overflowing with people in need of oxygen and ventilator support.** There was a shortage of medical oxygen.
- **The third wave, driven by the Omicron variant, was smaller both in terms of number of cases and hospitalisations and deaths. 21 lakh cases were reported in a week at the peak in mid-Jan. 2022, and deaths were about 7,800.**
- India has since seen ups and downs in the number of cases, but no wave across the country. Hospitals and health systems have been kept ready. Testing and genomic sequencing have been carried out continuously to monitor the situation.

Consequences of the WHO declaration

- Since there are no lockdowns; international travel, restaurants, and cinemas are normal; and containment and control measures haven't been needed for some time now, **not much will change on ground with the WHO declaration.**
- As per experts, there exists **a tiny possibility that the virus may mutate to cause more severe disease.** So as a precaution, some surveillance of sewage, and reservoirs should continue.

MISCELLANEOUS

History and significance of Kremlin, the symbol of Russia's political authority

Relevance: Prelims



Why in news?

- Russia accused Ukraine of recently attacking the Kremlin with drones overnight in a failed attempt to kill President Vladimir Putin.
- Unverified videos showed a flying object exploding in an intense burst of light near the dome of the Kremlin Senate building during this alleged attack.

What is the Kremlin?

- The word Kremlin literally means “fortress inside a city”. Though there are over 20 kremlins across Russia, the most important and popular one is in Moscow.
- It refers to the Russian political authority and has been the seat of political power in Russia for much of the period since the 14th century.
- The 28-hectare Kremlin which is enclosed within the Kremlin Wall with its distinctive towers, is situated on the bank of the Moskva river.
- It comprises five palaces and four cathedrals. To the east of the Kremlin are the iconic St Basil's Cathedral and Red Square, where major state functions take place.
- The Kremlin has been a UNESCO World Heritage Site since 1990.

Built and rebuilt over centuries!

- Kremlin has seen several fortifications since the 12th century.
- **Ivan III**, the Grand Prince of Moscow from 1462 to 1505, undertook **an ambitious plan to rebuild the Kremlin, giving it much of the grandeur that we see today**. He invited a number of skilled architects from Renaissance Italy, who built the current Kremlin wall and its towers and the Palace of Facets.
- The Kremlin **fell into disrepair** after Czar Peter I, known as Peter the Great, moved the capital to St Petersburg in 1713.
- During the late 18th century, **Empress Catherine II (Catherine the Great)** got repairs and new buildings done at the site.
- **Napoleon**, while retreating after his failed invasion bid in 1812, ordered that the Kremlin be blown up. However, the rain had wet the explosives, and his orders could not be carried out fully.
- In the mid-19th century, **the Grand Kremlin Palace was built**. Today, it serves **as the residence of the Russian President**.



'Sengol' sceptre, first given to Nehru to be installed in the new parliament



Relevance: Prelims & Mains Paper I; History & Culture

Why in news?

- The upcoming inauguration of the new parliament building will see **PM Narendra Modi install a historic sceptre from Tamil Nadu** next to the Lok Sabha Speaker's seat.
- The word Sengol is derived from the **Tamil word "Semmai"**, meaning **"Righteousness"**.
- The sceptre is a **"significant historical" symbol of Independence** as it signifies the transfer of power from the **British to the Indians**.
- **Pandit Jawahar Lal Nehru accepted Sengol** at around 10:45 pm of August 14, 1947, through the **Adhinam of Tamil Nadu**.



Why was the Sengol given to Nehru?

- According to an official document, just before Independence, Lord Mountbatten, the last Viceroy of India, asked Nehru, the soon-to-be prime minister, about “the ceremony that should be followed to symbolise the transfer of power from British to Indian hands”.
- Nehru went to consult C Rajagopalachari, the last Governor-General of India, who told him about a ceremony performed during the Chola dynasty, in which the transfer of power from one king to the other was sanctified and blessed by high priests.
- The newly crowned ruler would be given the Sengol with an order to rule his subjects fairly and justly.

How was the Sengol made?

- Once Nehru agreed to perform the suggested ceremony, Rajagopalachari, also known as Rajaji, was tasked with the responsibility of arranging a sceptre.
- Subsequently, he reached out to Thiruvaduthurai Atheenam, a well-known mutt in Tamil Nadu’s Tanjore district, for help and its leader commissioned the manufacturing of the Sengol to Chennai-based “Vummidi Bangaru Chetty” jewellers..
- Constructed by two men — Vummidi Ethirajulu and Vummidi Sudhakar, both are still alive and remember making it — the sceptre measures five feet in length and has a ‘Nandi’ bull on top, symbolising justice.

Sengol's handover to Nehru

- Three people, including “the Deputy high priest of the Adheenam, the Nadaswaram player Rajarathinam Pillai and the Oduvar (singer)”, brought in the newly-made Sengol from Tamil Nadu.
- During the ceremony, which took place on **August 14, 1947**, a **priest gave the sceptre to Lord Mountbatten and then took it back**. It was then taken in procession to Pt Jawaharlal Nehru's house, where it was handed over to him. A **special song was rendered**, as specified by the high priest.
- The song played during the ceremony was **composed by the 7th-century Tamil saint Tirugnana Sambandar — a child prodigy** who lived **only 16 years**.
- The event was attended by **Dr Rajendra Prasad**, who would go on to become **India's first President**, and many others.

