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Preparation**

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POLITY & GOVERNANCE

Centre cuts LPG cylinder prices by Rs. 200 across the country

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- In a move that will bring **respite to households** across the nation, **the Union Government** has announced a **substantial reduction in the price of cooking gas**.
- Effective from 30th Aug, **the price of a 14.2 Kg LPG cylinder has been reduced by Rs 200 in all markets across the country**. In Delhi for instance, the decision has brought down the cost of a **14.2 Kg cylinder** from the **previous Rs 1103 per cylinder to Rs. 903 per cylinder**.
- This reduction is **in addition to the existing targeted subsidy of Rs 200 per cylinder to PMUY households**, which **will continue**. For PMUY households therefore, the **effective price in Delhi** after this reduction has come down to **Rs. 703 per cylinder**.
- It may be noted that **there are more than 31 Cr domestic LPG consumers in the country including 9.6 Cr PMUY beneficiary families** and this reduction **will help all LPG consumers in the country**.
- To clear pending PMUY applications and to provide deposit free LPG connection to all eligible households, the Government will **shortly start distribution of PMUY connections to 75 lacs women from poor households who do not have an LPG connection**. This will **increase the total number of beneficiaries under PMUY from 9.6 cr to 10.35 cr**.

WFI suspended by United World Wrestling

Relevance: Prelims & Mains Paper II; Governance



Why in news?

- In the backdrop of the wrestlers' protest over various issues, United World Wrestling (UWW), the world governing body for the sport, has provisionally suspended the Wrestling Federation of India (WFI) primarily for not conducting its elections on time.

The impact

- In the absence of an elected body, Indian wrestlers and their support personnel such as coaches, assistant coach, sport physicians or masseurs will only be able to participate in UWW-sanctioned events under the UWW flag.
- This means that Indian wrestlers cannot compete under the national flag in UWW events, including the World championships in Belgrade in September. No national anthem will be played if an Indian wrestler wins a gold medal.

What caused the delay?

- As some prominent wrestlers — including Olympic medalists Bajrang Punia and Sakshi Malik and World championship medallist Vinesh Phogat — brought allegations of sexual harassment, intimidation, financial irregularities and administrative lapse against the then WFI president Brij Bhushan Sharan Singh and others and sat in protest at Delhi's Jantar Mantar in January, the Union Sports Ministry asked the federation chief to step aside until an M.C. Mary Kom-headed Oversight Committee (OC) completed its enquiry.
- After the enquiry, the WFI elections were postponed until May 7. The wrestlers then returned to the protest site and demanded the arrest of Brij Bhushan. They also demanded that Brij Bhushan's family members should be stopped from contesting the elections. Brij Bhushan himself was not eligible to contest the WFI polls after completing three terms (12 years),
- As the aforesaid polls got further delayed, the UWW found sufficient grounds to suspend the WFI due to the prevailing situation for at least six months. The absence of an elected president and a board did not comply with UWW regulations and its conditions for membership. .



Govt forms committee on simultaneous elections



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The govt has constituted a committee headed by former president of India Ram Nath Kovind to explore the possibility of “one nation, one election.”
- Over the years, PM Narendra Modi has pushed for the idea of simultaneous Lok Sabha and state assembly polls. However, many opposition parties have been against the idea in the past.
- Assembly polls are due in five states in Nov.-Dec. of 2023 and they will be followed by the Lok Sabha elections in May-June next year.
- However, the recent moves by the govt have thrown open the possibility of advancing the general elections and some state polls, which are scheduled after and with the Lok Sabha contest.

Arguments around holding simultaneous elections



- There are pros and cons here. Making polls simultaneous would address various concerns, such as reducing the cost of holding elections and limiting all elections to a single season.
- At present, there is an election in one state or the other at almost any given time, and those who favour simultaneous polls argue that the Model Code of Conduct gets in the way of the govt announcing projects or policy plans.
- Against the idea, the arguments include the complexity of such an exercise, the widely held view that simultaneous polls would benefit the nationally dominant party at the cost of regional players, and the complications that would arise if any of the govts were to collapse before completing its term. Leave alone state legislatures, even the central govt could fall.
- Of the Lok Sabhas since 1952, many were dissolved ahead of schedule — such as in 1971, 1980, 1984, 1991, 1998, 1999 and 2004.
- There would also be logistical issues, requiring about twice as many electronic voting machines and Voter Verifiable Paper Audit Trail machines.

A timeline of polls since independence

- Lok Sabha and state legislatures went to polls together in 1952 and 1957, with the Congress initially comfortably placed all over the country.
- The synchronised cycle was first broken in Kerala, in July 1959, when the Centre invoked Article 356 of the Constitution to dismiss the ministry headed by E M S Namboodiripad of the Communist Party. This was followed by state elections in Feb. 1960.
- As the Congress's popularity declined, it suffered major setbacks in several states in the 1967 elections. Consequently, govts of smaller parties came to power. Defections and counter-defections ultimately led to the dissolution of Assemblies, which separated the poll cycles of many states from the central one.
- At present, Assembly elections in Andhra Pradesh, Odisha, Arunachal Pradesh and Sikkim are held together with Lok Sabha polls.
- In recent years, Assemblies have been completing their tenures, mainly because of the anti-defection law of 1985 and Supreme Court judgments on invoking Article 356. The Supreme Court had held that the President can put a state Assembly in suspended animation, but cannot dissolve it without the concurrence of Parliament. Further, the validity of the proclamation of President's rule may be examined by the judiciary.

Efforts to address concerns regarding simultaneous polls

- In a draft report in 2018, the Law Commission headed by Justice B S Chauhan held that simultaneous elections could not be held within the existing framework of the Constitution. These could be held together "through appropriate amendments to the Constitution, the Representation of the People Act 1951, and the Rules of Procedure of Lok Sabha and state Assemblies".
- At least 50% of the states may ratify the constitutional amendments. The Commission recommended that all elections due in a calendar year be conducted together.
- Since a no-confidence motion, if passed, may curtail the term of Lok Sabha or an Assembly, the Law Commission recommended replacing the "no-confidence motion" with a "constructive vote of no-confidence" through appropriate amendments — a govt may only be removed if there is confidence in an alternative govt.

Firm opposition!

- The Opposition is wary of a concept that would take away the regional element of state polls, and leave regional personalities overshadowed by national leaders.
- In 2023 too, leaders from parties such as Jharkhand Mukti Morcha, Shiv Sena (UBT) and the Congress have opposed the idea so far.

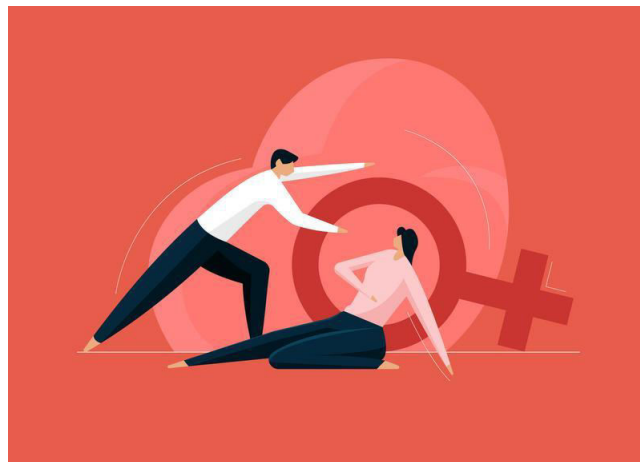
'False promise to marry' to be an offence under the new bill



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- If a man promises to marry a woman but never intends to, and still has 'consensual' sex with her, it will amount to a criminal offence under Section 69 of the proposed Bharatiya Nyaya Sanhita (BNS), 2023.
- The Bill, which seeks to replace the Indian Penal Code (IPC), 1860, identifies 'sexual intercourse on false promise of marriage' as an offence.
- At present, the offence is not carved out separately in the IPC, but courts have dealt with similar cases through other provisions within the criminal law framework.



Section 69

- Chapter 5 of the Bill, titled "Offences against woman and children" describes 'sexual intercourse by employing deceitful means etc.'
- Section 69 creates two violations: one by deceitful means, and one by a 'false promise to marry.' Deceitful means will include the "false promise of employment or promotion, inducement or marrying after suppressing identity."
- The false promise to marry will be attracted only when a man makes a promise to marry a woman, with the intention of breaking it, for the purpose of getting her consent and sexually exploiting her. Both offences will attract a penalty of up to ten years of imprisonment.

IPC's stance on cases of 'false promise to marry'



- In 2016, a quarter of the total rape cases registered in Delhi pertained to sex under 'false promise of marriage'.
- The National Crime Records Bureau in the same year recorded 10,068 similar cases of rape by "known persons on a promise to marry the victim" (the number was 7,655 in 2015).
- These cases happen in one of two ways — when rape is committed, and the promise of marriage is used to silence the victim, or where the promise is made to 'convince' the person into entering a sexual relationship. Activists note that such cases play out mostly among socially disadvantaged women, given that legal remedy cannot be easily sought.
- BNS penalises those coercing women into sexual relationships. Previously, these cases were dealt with through a joint reading of Sections 375 and 90 of the IPC.
- Section 375, which defines rape, further defines consent as "an unequivocal voluntary agreement when the woman by words, gestures or any form of verbal or non-verbal communication, communicates a willingness to participate in the specific sexual act."

(more ahead)

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- Section 375 also lists seven types of consent which would amount to rape if violated; these include if a man has sexual intercourse with a woman "without her consent," or consent taken through fear of death, hurt or intoxication. In 2021, the Supreme Court reiterated that under Section 375, a woman's consent "must involve an active and reasoned deliberation towards the proposed act".
- Section 90 says consent, given under "fear of injury" or "misconception of fact," cannot be considered as consent. Cases of false promise to marry are dealt with under the latter, where a 'misconception' is used to assess the validity of consent.

Difference between 'false promise' and 'breach of promise'

- The law has distinguished between a 'false promise' and a 'breach of promise' on the basis of proving if the man intended to marry at the time of engaging in sex. Courts have previously recognised the ambiguity in determining consent and intention in such cases.
- The SC observed that a false promise is "given on the understanding by its maker that it will be broken," but a breach of promise is "made in good faith but subsequently not fulfilled." Put simply, if a man can prove he intended to marry the woman before he entered into a sexual relationship, but later is unable to due to whatever reason, it is not legally punishable.
- The Supreme Court in 2022 held that consensual sex on a 'genuine' promise of marriage does not constitute rape.

How is intention to marry proved?

- Cases of 'false promise of marriage' look at two central issues — how consent is obtained (through deceitful means, or by misconception), and whether the man ever intended to marry the woman.
- The Supreme Court this year said every breach of promise is not rape, noting: "One cannot deny a possibility that the accused might have given a promise with all seriousness to marry her, and subsequently might have encountered certain circumstances unforeseen by him or the circumstances beyond his control, which prevented him."
- But activists argue that 'circumstances' practically translate to social norms that uphold the status quo, reinforcing gender roles, patriarchy and caste lines. Moreover, Section 69 in the BNS codifies the offence instead of creating a new one. Thus, in its present form, the Bill doesn't dissolve the confused distinction between 'false promise' and 'breach of promise,' and overlooks the inherent limitations in criminal law.

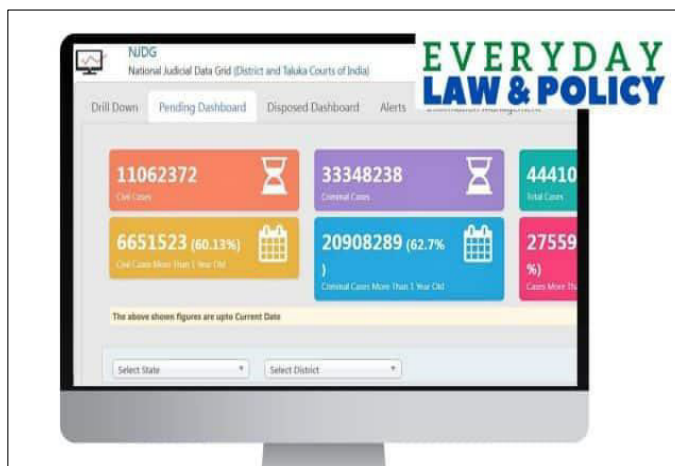
National Judicial Data Grid to aid courts in disposing pending cases



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Supreme Court recently onboarded its case data on the National Judicial Data Grid. The NJDG portal is a national repository of data relating to cases instituted, pending and disposed of by the courts across the country.



What is the National Judicial Data Grid?

- NJDG (<https://njdg.ecourts.gov.in/njdgnew/index.php>) is a database of orders, judgments and case details of 18,735 District and subordinate Courts and High Courts created as an online platform under the eCourts Project.
- Its key feature is that the data is updated in real-time and has granular data up to the Taluka level.

Who runs the NJDG?

- The NJDG was built as part of Phase II of the e-Courts project, which is a Centrally Sponsored Scheme.
- With over 18,735 courts computerised across the country, the data is integrated with the NJDG.
- Currently, litigants can access case status information of 23.81 crore cases and more than 23.02 crore orders/judgments.



How does the data help?

- NJDG works as a monitoring tool to identify, manage & reduce pendency of cases. Take, for instance, the Supreme Court data. For 2023, the total pendency of registered cases in SC is 64,854. But the Cases instituted last month were 5,412 while cases disposed of in the last month were 5,033.
- This shows that the pendency in SC is largely due to legacy cases since the Court is currently disposing of approximately the same number of cases filed on an annual basis.
- It also helps identify specific bottlenecks in judicial processes. For example, if the number of land disputes in a particular state shoots up, it helps policymakers look into whether the law needs to be strengthened. Referring to the data of year-wise pendency of cases, the CJI said the apex court has less than a hundred cases pending before 2000 and it gives data tools to the Chief Justice to re-organise work and dispose of the oldest cases.
- It also helps generate inputs related to particular areas of law. For example, to track cases related to land disputes, Land Records data of 26 States have been linked with NJDG.

SC slams Ladakh administration for dragging its feet over allotment of party symbol to National Conference

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Supreme Court recently reprimanded the Lieutenant Governor's administration of the Union Territory (UT) of Ladakh for procrastinating in reserving the 'plough' as a party symbol for those candidates contesting on the National Conference's (NC) tickets in the Ladakh Autonomous Hill Development Council-Kargil (LAHDC-K) elections.
- The SC also set aside Ladakh's earlier election polling date of September 10 and directed the UT administration to re-notify election dates.
- It observed that the NC reserved the right to be "entitled to the exclusive allotment of the 'plough' symbol for candidates proposed to be put up by it".
- The SC, while dismissing the appeal of the Ladakh administration, put 'costs of ₹1 lakh on it' for wasting the court's time. A fresh notification issued by the Ladakh administration has fixed October 4 as the new polling date.

Reasons behind this reprimand

- The SC came down hard on the L-G administration because of its failure to abide by two orders of the J&K High Court and Ladakh — first issued by a single bench on August 9 and the second by a double-bench on August 14 — allowing the NC to retain 'plough' as its party symbol in Ladakh.
- 'Plough' is already a registered party symbol of the NC with the Election Commission of India (ECI). The apex court hinted at a deliberate delay by the administration.

The reason behind the legal tussle

- The UT of Ladakh listed parties and symbols in July this year through an official notification but didn't register NC as a party there.
- Ladakh, which was part of the Kashmir division of the erstwhile State of J&K, was carved out as a separate UT in 2019 after the Parliament adopted the J&K Reorganisation Act.
- After that, in 2019 itself, the ECI recognised the NC as a party for the UT of Jammu and Kashmir.
- The Ladakh administration denied the party symbol on the grounds that the reserved symbol 'plough' has to be notified by the ECI itself for Ladakh, and not by the UT of Ladakh.
- At present, the UT of Ladakh has no State Election Commission but an Election Authority to conduct the hill council polls.

NC's arguments

- The NC is the current political party in power in the LAHDC-K. It won 10 seats in the 30-member LAHDC-K to emerge as the single largest political party in the 2018 hill council elections.
- The NC accused the Election Authority of Ladakh of bias in denying them the party symbol, saying that "the same Election Authority granted the Aam Aadmi Party its party symbol for the 2020 LAHDC-Leh polls".
- Quoting rules, the NC argued that if a political party, which is recognised as a State party in some State or States, sets up a candidate at an election in a constituency in any other State or UT in which it is not a recognised State party, then such candidate may be allotted the symbol reserved for that party.

Ladakh's political landscape

- The BJP carved out Ladakh as a UT largely on the long pending demands made by the Buddhist population of the region, which is split between the Muslim-majority Kargil district and the Buddhist-majority Leh district.
- The BJP may not like the return of any regional force to Ladakh that will revive the politics in favour of the restoration of provisions of Article 370 or reunification of J&K with Ladakh.
- The Gupkar alliance, steered by NC president Dr. Farooq Abdullah, has repeatedly demanded reunification and restoration of the special constitutional status to erstwhile J&K.
- In case the NC returns to power at the LAHDC-K in these polls, it will sell the victory as a vote for reunification and special status. Notably, the BJP managed to win only one seat in the 2018 polls.

Proposed Bill aims to regulate the appointment of the Chief Election Commissioner (CEC) and other ECs



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The ongoing special session of Parliament will witness the discussion on a Bill that seeks to regulate the appointment, service conditions, and office terms of the Chief Election Commissioner (CEC) and other Election Commissioners.
- Although the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023, was passed in the Rajya Sabha recently, it has now finally made its way to the Lok Sabha for passage.
- Significantly, the Bill attempts to alter constitutional provisions that equate ECs with Supreme Court judges. It also seeks to undo the top court's recent ruling in 'Anoop Baranwal vs. Union of India'.

Details

- This Bill proposes to revise the salary, allowance, and service conditions of the Chief Election Commissioner (CEC) and the two Election Commissioners, to bring it at par with those of a Cabinet Secretary.
- Until now, Election Commissioners were at par with Supreme Court judges in this regard, under the Election Commission Act, of 1991. However, the Bill's passage will result in the 1991 Act's repeal.
- Although the stipulated salary of a Supreme Court judge and the Cabinet Secretary is nearly the same, top court judges are entitled to additional post-retirement benefits, including domestic help and lifetime provision of drivers.
- But the issue is that this move seeks to bring Election Commissioners under the ambit of the bureaucracy, which in turn could stifle their authority and independence.

(more ahead)

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- The EC's primary task is that of superintendence, direction, and control of elections, as laid down under Article 324. However, this control of elections is likely to shift if the Election Commissioner, who will now be equivalent to the rank of a Cabinet Secretary tries to discipline a Union Minister for electoral violations.
- Similarly, the proviso to Article 324 (5) of the Constitution says that a CEC can only be removed in a manner similar to that of a SC judge.
- The reason behind the EC's independence and equivalence to SC judges was so that it could freely and fairly decide cases involving the govt, the Prime Minister, and Ministers.
- Additionally, this Bill seeks to constitute a committee of the Prime Minister, the Leader of the Opposition in the Lok Sabha, and a Cabinet Minister nominated by the PM to select members of the Election Commission of India.
- Notably, this committee will not have the Chief Justice of India as a member, contrary to the top court's suggestion in a ruling delivered in March this year.

Details of the SC ruling



- On March 2, a five-judge SC bench unanimously ruled that a high-power committee of the PM, Leader of Opposition in Lok Sabha, and the CJI must pick the CEC and ECs.
- Acting on a PIL filed by Anoop Baranwal in 2015 that challenged the validity of the prevailing system of the President appointing the ECI members, on the PM's advice, as unconstitutional, the bench came up with the idea of having a committee.
- In 2018, a two-judge bench of the SC referred this case to a larger bench, adding that it required a close examination of Article 324 which deals with the CEC's role.
- Article 324(2) states, "The Election Commission shall consist of the Chief Election Commissioner and such number of other Election Commissioners, if any, as the President may from time-to-time fix and the appointment of the Chief Election Commissioner and other Election Commissioners shall, subject to the provisions of any law made in that behalf by Parliament, be made by the President."

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- However, since no law was made by Parliament as prescribed by the Constitution, the court stepped in.
- Besides this, Article 324(5), allows the President to decide the conditions of service and tenure of the ECs, albeit "subject to a law" made by Parliament. In furtherance of this, the Election Commission Act was passed by Parliament in 1991.

Proposed changes to the 1991 Act

- The Bill seeks to repeal the 1991 Act. Section 3 of this Act stated, "There shall be paid to the Chief Election Commissioner [and other Election Commissioners] a salary which is equal to the salary of a Judge of the Supreme Court."
- However, Section 10 of the Bill states that the salary, allowances, and service conditions of the CEC and ECs shall be the same as those of the Cabinet Secretary.

Centre launches Vishwakarma scheme for those engaged in traditional crafts and skills

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- PM Narendra Modi recently launched the PM Vishwakarma scheme in New Delhi on the occasion of Vishwakarma Jayanti, for giving govt support to workers engaged in traditional crafts and skills.
- This scheme is also being seen as a means for the govt to reach out to the economically marginalised and socially backward communities – particularly the Other Backward Classes (OBC) groups – before the 2024 Lok Sabha polls.



Details

- Vishwakarma scheme has an outlay of Rs 13,000 crore and is fully funded by the Central govt.
- It is aimed at helping people who live with traditional skills, work with tools and with their own hands, and are mostly from the OBC community. They include - carpenters, goldsmiths, masons, laundry workers, barbers etc.
- Vishwakarma, in Hindu mythology, is seen as the architect of the gods and was the divine carpenter and master craftsman who fashioned the weapons of the gods and built their cities and chariots.
- Some legends say he was the architect of the mythical city Lanka mentioned in the Hindu epic Ramayana and is also said to have made the great image of Jagannatha at Puri in Odisha. He is considered the patron deity of workers, artisans, and artists.

Who is eligible?

- The professionals engaged in traditional crafts and skills for centuries, often taught by elders in the family, have faced certain problems. These include a lack of professional training for their work, of modern tools, the issue of distance from the markets relevant to them and the availability of little capital for investment.
- Families associated with following 18 such different sectors will be helped in all possible ways:
 - (i) Carpenters
 - (ii) Boat Makers
 - (iii) Armourers
 - (iv) Blacksmiths
 - (v) Hammer and Tool Kit Makers
 - (vi) Locksmiths
 - (vii) Goldsmiths
 - (viii) Potters
 - (ix) Sculptor, Stone breakers
 - (x) Cobblers (Shoesmiths/ Footwear artisans)
 - (xi) Masons (Rajmistri)
 - (xii) Basket/Mat/Broom Makers/Coir Weavers
 - (xiii) Doll & Toy Makers (Traditional)
 - (xiv) Barbers
 - (xv) Garland makers
 - (xvi) Washermen
 - (xvii) Tailors
 - (xviii) Fishing Net Makers

Benefits to be availed

- The scheme is to help enhance the skills of workers employed in these fields and help them avail loans easily to aid their earnings.
- They will be given skill upgradation involving basic and advanced training, a toolkit incentive of ₹15,000, collateral-free credit support up to ₹3 lakhs at a concessional interest rate of 5%, incentive for digital transactions and marketing support.
- A toolkit booklet has also been released in 12 Indian languages, with accompanying video elements, to aid the knowledge of workers on new technologies in their field.
- A stipend of Rs 500 will be provided for skill training and Rs 1,500 to purchase modern tools. Five lakh families will be covered in the first year and 30 lakh families over five years.

Past govts' efforts to get the Women's Reservation Bill passed in the Parliament



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The chequered legislative history of the Women's Reservation Bill began when the H D Deve Gowda-led govt introduced it in Parliament in 1996.
- Almost every govt has since tried to push it through — the UPA govt even managed to get it passed in Rajya Sabha in 2010 — but the move could not come to fruition for lack of political will and consensus.



First attempt: United Front Govt



- The Constitution (Eighty-first Amendment) Bill, 1996 was first introduced in the Lok Sabha in Sept. 1996 during the reigns of United Front government, a coalition of 13 parties. It was a surprise move, with several leaders of the Janata Dal and other constituents of the ruling coalition not being in its favour. The Bill was referred to a Joint Committee the following day.
- Among the 31 members of the parliamentary panel were (then MPs) Mamata Banerjee, Nitish Kumar, Sharad Pawar, and Sushma Swaraj etc. The panel proposed seven major suggestions and felt that the Bill's wording of "not less than one third" with regard to reservation for women was vague and liable to be interpreted differently.
- It also suggested that there should be reservation of seats for women in the Rajya Sabha and the Legislative Councils and even stated that the benefit of reservation to the Other Backward Classes (OBCs) should be considered "at the appropriate time".
- The committee recommended that the provisions governing the reservation of seats for women in the Lok Sabha and the state Assemblies should be for a period of 15 years from the date of commencement of the Act, with them being reviewed after that period to decide whether the reservations should continue.
- The committee adopted its report in Dec. 1996. But there were strong dissenting voices. Among them was Nitish Kumar, the current Bihar Chief Minister, who spoke of reservation for OBC women.
- The Bill was taken up for discussion in the Lok Sabha in May 1997 but there was stiff opposition from within the ruling coalition. Leaders from the Hindi heartland opposed the Bill owing to the OBC sub-quota demand. The UF govt could not pass the Bill and it lapsed after the dissolution of this Lok Sabha.

Second attempt: NDA Govt

- Between 1998 and 2004, the BJP-led NDA govt headed by Atal Bihari Vajpayee tried to get the Bill passed multiple times.
- The first time, on July 13, 1998, the Lok Sabha saw chaotic scenes. As the Bill was introduced, the Rashtriya Janata Dal (RJD) and the Samajwadi Party (SP) MPs registered their protests. One RJD MP even went on to snatch the copies of the Bill from the Speaker and tore them up.
- The Bill was again introduced in Dec. 1998 despite protests from SP, and the BSP. There were differences among the NDA allies over it as well. Nitish, who was opposed to the Bill, was then the Railway Minister. The Bill, however, lapsed as the House was dissolved after the fall of the Vajpayee govt in April 1999.

Vajpayee Govt's another attempt

- After Vajpayee formed the NDA govt again, the Bill was introduced on December 23, 1999. This was again greeted by protests from the members of the SP, BSP, and RJD.
- The Vajpayee govt tried to push the Bill three times afterwards — in 2000, 2002 and 2003, but could not succeed despite support from the Congress and the Left, the main Opposition parties at the time.
- In July 2003, efforts to build a consensus were unsuccessful. The Bill subsequently lapsed.

UPA push for the Bill

- In 2004, the Congress-led govt headed by PM Manmohan Singh, declared that the UPA will "take the lead to introduce legislation for one-third reservation for women in Vidhan Sabhas and in the Lok Sabha". But it was not easy, since a few of the UPA's key constituents such as the RJD —were not in its favour.
- The UPA govt finally introduced the Bill on May 6, 2008 — and as was the case up to this point — dramatic scenes followed.
- The Bill sought to reserve, as nearly as may be, one third seats of the Lok Sabha and Legislative Assembly for women and provide one-third the number of seats reserved for the SCs and STs in the Lok Sabha and state Assemblies for women of those categories.
- The committee, which submitted its report to Parliament in Dec. 2009, recommended that the Bill be passed in its present form without any delay.

March 9, 2010: Red-letter day

- A breakthrough came in 2010. The RJD was no longer a part of the UPA government, and along with the SP, extended outside support. In a surprise move, Nitish Kumar made a U-turn and extended support to the Bill.
- After two days of discussion, the Rajya Sabha, on March 9, 2010, passed the Bill by over a two-third majority — the BJP and the Left, who were in the Opposition, supported it.
- On the day the Bill was passed, seven MPs, primarily from the SP and the RJD were suspended for "unruly" conduct.
- The UPA govt, however, did not show the political will to get the Bill passed in the Lok Sabha despite the BJP and the Left supporting it.

Women's Reservation Bill gets passed, but a long road lies ahead in its implementation



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- In a historic development, The Constitution (One Hundred and Twenty-Eighth Amendment) Bill, 2023, seeking to reserve 33% of seats in Lok Sabha and state Assemblies for women, was recently passed unanimously by Rajya Sabha, a day after it was approved in the Lok Sabha.
- The Women's Reservation Bill, the first legislation to be cleared by both Houses in the new Parliament building, secured 214 votes in its favour with none against it in the Rajya Sabha.
- Notably, in March 2010, Rajya Sabha passed this bill but the legislation was not taken up by Lok Sabha.



Details



- As per the aforesaid Bill, "as nearly as maybe, one-third (including the seats reserved for women belonging to the Scheduled Castes and Scheduled Tribes) of the total number of seats to be filled by direct election to the House of People shall be reserved for women".
- The Bill proposes a similar provision for Assemblies in the states and Delhi.
- Like the previous Bill, this Bill proposes to introduce new articles — 330A and 332A — in the Constitution. These new provisions will introduce the changes for Lok Sabha and Assemblies respectively. It also has a sunset clause, mandating that the reservation will be for a period of 15 years from the date of commencement of the Act.
- The key difference, however, is that the Bill makes the implementation of women's reservation contingent upon the delimitation process.
- Notably, the women's reservation may not effectively be operationalised in Lok Sabha before the general elections of 2029.
- The 42nd Amendment froze the delimitation exercise until the results of the first Census after 2000 was published. In 2001, this was further extended for 25 years. And now, delimitation would happen after the results of the first Census after 2026 is published.

Identification of the reserved seats

- The Bill states that **one-third of the seats in Parliament and state Assemblies will be reserved for women.** However, it doesn't specify how these seats will be identified. It's important to remember that this proposed constitutional amendment is **enabling in nature.** In other words, it will grant the govt the power to enact a law for its implementation. Hence, it is expected that the **determination of seats will be addressed by a separate law that the govt will introduce.**
- Notably, when the UPA tried to amend the Constitution in 2010, its amendment Bill also didn't specify the method to identify which seats would be set aside for women. However, the govt at the time had proposed that **constituencies reserved for women would be obtained through a draw of lots to ensure that no seat was reserved more than once in three consecutive elections.**
- The NDA-III govt's Bill also proposes the rotation of reserved seats. It's not yet clear how exactly the Modi govt intends to identify the 33% of seats.

The current procedure to decide reserve seats for SCs and STs

- The Delimitation Act, 2002 lays down **broad principles** for reserving seats. The Delimitation Commission appointed under the Act is **responsible for deciding the number of Parliamentary and Assembly constituencies to be reserved** based on the **population.**
- Section 9 (1)(c) of the Act says "Constituencies in which seats are reserved for the Scheduled Castes shall be distributed in different parts of the State and located, as far as practicable, in those areas where the proportion of their population to the total is comparatively large".
- Similarly, for the Scheduled Tribes, the criteria are **those areas "where the proportion of their population to the total is the largest."**

Constitutional amendments needed to operationalise the scheme of women's reservation

- For delimitation — which is a **precondition for the implementation of reservation — Articles 82 and 170(3) of the Constitution would have to be amended.**
- Article 82 provides for the readjustment of constituencies (number and boundaries) of both Lok Sabha and state Assemblies **after every Census.** Article 170(3) deals with **composition of the Legislative Assemblies.**

Reservation for women in Panchayati Raj institutions and Urban Local Bodies

- Article 243D of the Constitution provides for **reservation of seats for Scheduled Castes, Scheduled Tribes, and women in Panchayats.**
- It also says that **nothing in this part shall prevent the legislature of a state from making any provision for reservation of seats in any Panchayat or offices of Chairpersons in the Panchayats at any level in favour of the backward classes of citizens.**
- As per the provisions of Article 243D, **not less than one-third of the total number of seats reserved for SCs and STs shall be reserved for women.**
- As per the latest data, **in at least 18 states, the percentage of women elected representatives in Panchayati Raj institutions was more than 50%.**
- The highest proportion of women representatives was in Uttarakhand (56.02%) and the lowest was in Uttar Pradesh (33.34%). Overall, there were **45.61% women representatives in Panchayati Raj institutions in the country.**

Delhi HC protects Anil Kapoor's personality rights



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Delhi High Court recently allowed Kapoor's pleas for protection of his personality rights from misuse by third parties.
- In the past, the courts have given similar judgements to protect Rajinikanth's name and Amitabh Bachchan's voice.



What is a personality right?

- The name, voice, signature, images or any other feature easily identified by the public are markers of a celebrity's personality and are referred loosely as "personality rights." These could include a pose, a mannerism or any aspect of their personality.
- Many celebrities even register some aspects as a trademark to use them commercially. For example, Usain Bolt's "bolting" or lightning pose is a registered trademark.
- The idea is that only the owner or creator of these distinct features has the right to derive any commercial benefit from it. Exclusivity is a big factor in attracting commercial dividends for celebrities. So unauthorised use causes a tangible loss of revenue.
- Celebrities can move the Court and seek an injunction when an unauthorised third party uses their personality rights for commercial purposes.

How does the law protect it?

- Personality rights or their protection are not expressly mentioned in a statute in India but are traced to fall under the right to privacy and the right to property. Even as the Delhi High Court and the Madras High Court have passed interim orders, the law is at a nascent stage in India.
- Many concepts in intellectual property rights used in protection of trademarks such as passing off, deception can be applied while deciding whether a celebrity deserves to be protected through an injunction.
- In the case of Anil Kapoor, the Delhi High Court granted an ex-parte, omnibus injunction restraining 16 entities from using Kapoor's name, likeness, image, using technological tools like Artificial Intelligence, face morphing and even GIFs for monetary gain or commercial purpose.
- An ex-parte injunction is when relief is granted to a party without hearing the other side. An omnibus injunction refers to an injunction granted against any unauthorised use- even those that are not mentioned in the plea.

(more ahead)

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- The injunction acts as a deterrent. However, even when a Court grants an injunction, it is not easy for a celebrity to track all misuse and take action. The celeb has to then issue a takedown order to an online intermediary like Google to have them removed. These legal processes have significant costs involved but could still be beneficial compared to the loss in revenue to the celebrity.

Past rulings

- Anil Kapoor had moved the Delhi High Court in a civil suit seeking protection of his personality- his name, photographs, manner of speaking, gestures etc. He also claimed protection of his copyright in the dialogue and in the image and other associated works.
- Kapoor's lawyer, who is an intellectual property rights specialist, argued that several defendants had misappropriated Kapoor's name and elements of his persona to earn profits. For e.g., the expression "Jhakaas", Kapoor's trademark dialogue is a Marathi slang word but is popularised by Kapoor in Hindi films. The lawyer cited news reports stating that the manner in which Kapoor delivers the expression is exclusively associated with him.
- He distinguished the unauthorised use from "fair use." A fair use would be for example depiction in news, teaching material or other non-commercial uses or even artistic uses like mimicry or satire which is a copy but not mere reproduction. However, if a third-party uses it to profit from it, it cannot be termed fair use.
- Earlier in 2022, the Delhi High Court had dealt with a similar case involving Amitabh Bachchan. From using variations of his name such as "Big B" to including his "unique style of addressing the computer as 'Computer ji' and lock kiya jaye", the HC enjoined the use of his personality rights.

(more ahead)

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- The HC had relied on a 2012 order which also involved Bachchan. Titan Industries, the Tata company which also owns the jewellery brand Tanishq had moved the HC against a Muzaffarnagar-based jewellery store for using Bachchan's images from the Tanishq ad.
- In 2015, the Madras High Court, in a similar case involving actor Rajnikanth had observed that "personality right vests on those persons, who have attained the status of celebrity". The court's observation came in the actor's lawsuit against the producers of the movie "Main hoon Rajnikanth" claiming that his name, image, style of delivering dialogues had infringed his personality right.
- The HC had observed that from the title of the movie, the public viewing the movie would identify it with only the actor alone. The court said that the producers after admitting that the actor has a high reputation can't now say that Rajnikanth is a common name.

When can the Court grant an injunction?

- In the Titan case, the HC in its order listed out the "basic elements comprising the liability for infringement of the right of publicity."
- First, the right has to be valid. This means that the Court must be satisfied that the "plaintiff owns an enforceable right in the identity or persona of a human being."
- Second, is that the celebrity has to be easily identifiable in the alleged misuse.
- On how to prove that the celebrity is identifiable, the HC said that a simple "unaided identification" should be enough if the celebrity is well-known. Otherwise, the plaintiff will have to bring evidence "of a number of elements in the context of defendant's use which add up at a geometric rate to point to the plaintiff."
- The other evidence is to show evidence of the "defendant's intent to trade upon the identity of the plaintiff, from which identifiability can be presumed."

Centre takes over control of more than 100 properties of the Delhi Waqf Board



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Union Housing and Urban Affairs Ministry has taken over 123 properties belonging to the Delhi Waqf Board. It includes many historic mosques, medieval dargahs and cemeteries.
- Following a Delhi High Court order, a committee was formed by the govt to study the status of these monuments. The two-member committee submitted in its report that no representation or objection was received by it from the Delhi Waqf Board.
- Accordingly, these properties lapsed into the hands of the Central govt.

Details

- The Delhi Waqf Board disputed the committee's contention, arguing that it had resulted in "widespread panic, fear and resentment" among the Muslim community.
- As per the Waqf Board Chairman, the report had not been shared with the Waqf Board, and that there was no direction by the High Court to constitute a two-member committee in its order back in 2014. The Waqf Board has approached the Delhi High Court for redressal.
- Almost two weeks after the properties 'allegedly' lapsed into the hands of the Centre, the Waqf Board challenged the Union Ministry of Housing and Urban Affairs' letter which "absolves" the Board from matters pertaining to the said properties in the High Court.
- The Waqf Board's Chairman also claimed that the Board had gone to the High Court in January this year challenging the formation of a two-member committee for these properties. Even as the petition was pending before the court, the two-member committee's report came out.

Developments so far in 2023

- Most worshippers at the mosques and dargahs were not aware of the change of ownership of the properties until the Land and Development Office under the Housing Ministry started pasting notices to the effect outside these properties on February 17 this year.
- The notices, addressed to 'occupants' of the said properties, were for a survey of the place. Significantly, they did not mention the properties as mosques or dargahs, etc, nor did the notices call the addressee as the owner or possessor of the property.
- Things came out into the public domain when the boundary wall of the Babur Road Masjid-Madrassa compound was demolished in April this year.
- It was followed by a notice to the Masjid Takia Shah in the vicinity. The compound with a centuries-old a mosque and dargah was claimed to be a railway property.



The demolished boundary wall of the Babur Road Masjid-Madrassa compound

The Waqf Board's stand

- The Waqf Board which had gone to court in February following the de-listing of 123 properties, and asked for a halt to the surveys being conducted, filed a fresh application after the demolition of the aforesaid boundary wall.
- The Delhi High Court, however, allowed the survey to continue.

More notices and surveys!

- Last month, a notice for a survey was pasted outside New Delhi's Jama Masjid opposite Parliament House. Against the Waqf Board's wishes, the survey was carried out at the mosque on August 21.
- A day earlier, a portion of the Mamu-Bhanje dargah was demolished as it allegedly infringed on a public road. After that two other mosques - the Pandara Road mosque and the Sunehri Bagh Masjid were also surveyed.

Goa approves new beach shack policy

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- The Goa govt recently approved the 'Goa State Shack Policy 2023-2026', for the erection of temporary seasonal structures, beach shacks, deck beds and umbrellas along beach stretches for the next three tourist seasons.
- Beach shacks — typically built from eco-friendly materials such as bamboo, wooden poles and thatched palm leaves — have become a popular attraction for domestic and international tourists visiting Goa.
- The shack policy allows unemployed persons of Goan domicile to operate 'temporary' shacks on the beachfront during the peak tourist season from Sept. 1 to May 31.



Changes in the new policy

- In the draft policy, the govt inserted a contentious clause, stipulating that the age of applicants for allotment of beach shacks should be between 18 and 60, sparking outrage among traditional Goan shack holders. The previous beach shack policies had no bar on age. Notably, after objections and protests by shack owners, the govt has now decided to scrap the clause.
- In another move aimed at “encouraging newcomers” in the business, the govt has relaxed the eligibility criteria for experience, with 90% of shacks to be allotted to applicants having at least one year of experience running a shack and 10% to those with no experience.
- Citing complaints from tourists about Goan food missing from shacks, the new policy makes it mandatory for shacks to serve Goan cuisine.
- The penalty for subletting a shack has been hiked from Rs 10 lakh to Rs 25 lakh..

CSIR's Bhatnagar awards for 2022 announced after a year's delay

Relevance: Prelims & Mains Paper II; Governance

Why in news?

- After nearly a year's delay, the Council of Scientific and Industrial Research (CSIR) has publicised the list of awardees for the Shanti Swarup Bhatnagar (SSB) awards for 2022, considered among the prestigious prizes for science in India.
- While usually announced on September 26 – CSIR's Foundation Day – the prizes weren't announced last year, without any official reason being ascribed.
- Last year, the Ministry of Home Affairs constituted a committee to review all the national awards administered by various science and medical ministries and whittled down some of them. The SSB awards were however retained.
- The SSB Prize was instituted in memory of the first Director General of the CSIR – Dr. Shanti Swarup Bhatnagar.

List of winners

- This year's awardees constitute 12 scientists below the age of 45. They include:
- **Biological Sciences:** This is jointly awarded to Dr. Ashwani Kumar of CSIR-Institute of Microbial Technology and Dr. Maddika Subba Reddy of Centre for DNA Fingerprinting Diagnostics
- **Chemical Sciences:** This is jointly awarded to Dr. Akkattu T Biju of the Indian Institute of Science and Dr. Debabrata Maiti of the Indian Institute of Technology (Bombay)
- **Earth, Atmosphere and Planetary Sciences:** This is awarded to Dr. Vimal Mishra of the Indian Institute of Technology (Gandhinagar)
- **Engineering Sciences:** This is jointly awarded to Dr. Dipti Ranjan Sahoo of the Indian Institute of Technology (Delhi) and Dr. Rajnish Kumar of the Indian Institute of Technology (Madras)
- **Mathematical Sciences:** This is jointly awarded to Dr. Apoorva Khare of the Indian Institute of Science and Dr. Neeraj Kayal of Microsoft Research Lab
- **Medical Sciences:** This is awarded to Dr. Dipyaman Ganguli of CSIR- Indian Institute of Chemical Biology
- **Physical Sciences:** This is jointly awarded to Dr. Anindya Das of the Indian Institute of Science and Dr. Basudeb Dasgupta of Physics Tata Institute of Fundamental Research

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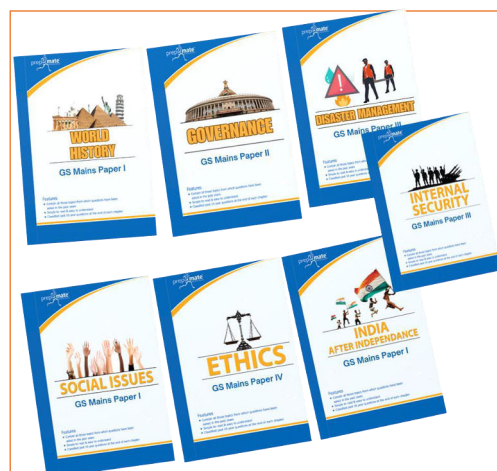


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INTERNATIONAL ORGANISATIONS & BILATERAL RELATIONS

EU's pioneering law - DSA forces big tech to reduce digital surveillance

Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- As Europe's sweeping rules to regulate the ways in which big tech uses algorithms to target users kick in, a number of companies including Meta, Google, and Snap, have been forced to make changes to their platforms — including more disclosures on how they use artificial intelligence (AI) to offer "personalised" content to users, and allowing them the option to opt out of being subjected to digital surveillance by these platforms.
- The European Union's groundbreaking Digital Services Act (DSA) went into effect recently.
- It constitutes an overhaul of the EU's social media and e-commerce rules, and tightly regulates the way intermediaries, especially large platforms such as Google, Meta, Twitter, and YouTube, moderate user content.



Key features of the DSA

- **Faster removals, opportunity to challenge:** Social media companies are required to add "new procedures for faster removal" of content deemed illegal or harmful. They must explain to users how their content takedown policy works. Users can challenge takedown decisions, and seek out-of-court settlements.
- **Bigger platforms have greater responsibility:** The legislation has junked the one-size-fits-all approach and put a greater burden of accountability on the big tech companies. Under the DSA, 'Very Large Online Platforms' (VLOPs) and 'Very Large Online Search Engines' (VLOSEs), that is, platforms with more than 45 million users in the EU, have more stringent requirements.
- **Direct supervision by the European Commission:** These requirements and their enforcement will be centrally supervised by the European Commission itself, ensuring that companies are not able to sidestep the legislation at the member-state level.
- **More transparency on how algorithms work:** VLOPs and VLOSEs will face transparency measures and scrutiny of how their algorithms work, and will be required to conduct systemic risk analysis and reduction to drive accountability about the societal impacts of their products. VLOPs must allow regulators and researchers to access their data to assess compliance and identify systemic risks of illegal or harmful content.
- **Clearer identifiers for ads and who's paying for them:** Online platforms must ensure that users can easily identify advertisements and understand who presents or pays for the ads. They must not display personalised ads directed towards minors or based on sensitive personal data.

Changes big tech has been forced to make

- The DSA imposes heavy penalties for non-compliance, which can be up to 6% of the company's global annual turnover.
- Companies that do not wish to abide by the rules cannot function within the EU. Due to the harsh repercussions and the threat of losing a market of around 450 million users, major social media companies have fallen in line, and announced they will allow more freedom to users in the way they interact with their platforms.
- **Meta:** The company that operates Facebook and Instagram has said it will introduce non-personalised digital feeds. From now on, Facebook and Instagram users will have the option to view Stories and Reels only from people they follow, ranked in chronological order, newest to oldest. They will also be able to view Search results based only on the words they enter, rather than personalised specifically to them based on their previous activity and personal interests.
- **Google:** The Internet search giant has said it will increase how much information it provides about ads targeted at users in the EU. It will also expand data access to third party researchers studying systemic content risks in the region.
- **Amazon:** The e-commerce giant sued the EU last month over its classification as a VLOP, which would require the company to comply with the DSA's stringent norms. This was the first legal challenge to the law.
- So far, the EU has designated 19 sites as VLOPs: Alibaba AliExpress, Amazon Store, Apple AppStore, Booking.com, Facebook, Instagram, Google Maps, Google Play, Google Shopping, LinkedIn, Pinterest, Snapchat, TikTok, Twitter (rebranded as X), Wikipedia, YouTube, Zalando, Microsoft Bing and Google Search.

Potential advantages and challenges before expanded BRICS



Relevance: Prelims & Mains Paper II; International Organisations

Why in news?

- Leaders of Brazil, Russia, India, China and South Africa took a call recently to expand the BRICS grouping from five countries to 11.
- The Johannesburg declaration, issued after the summit, said Argentina, Egypt, Ethiopia, Iran, Saudi Arabia and the United Arab Emirates (UAE) had been invited to become full members from January 1, 2024.



Origin of BRICS



- BRICS brings together five of the largest developing countries of the world, representing around 41% of the global population, around 24% of the global GDP, and around 16% of global trade.
- The acronym BRIC was first used in 2001 by Goldman Sachs in their Global Economics Paper. On the basis of econometric analyses, the paper projected that the four economies of Brazil, Russia, India, and China would be among the world's largest economies in the next 50 years or so.
- As a formal grouping, BRIC started after the meeting of the leaders of Russia, India and China in St. Petersburg in 2006.
- The first BRIC Summit was held in Yekaterinburg, Russia, in 2009. In 2010, it was decided that South Africa should be included in this group.

Expansion

- By growing to a size of 11 members, BRICS has become larger than ASEAN (10 members) and Shanghai Cooperation Organisation (9).
- But while many portrayed the new expanded grouping as an alternative to western blocs like the G7, India doesn't view this as an "anti-West" grouping.
- In fact, France, one of the P-5 (permanent members of the UN Security Council) countries which is also a member of G7, is learnt to have expressed interest in engaging with the BRICS more actively.
- Meanwhile, India has strategic partnerships with four of the new six members — Saudi Arabia, UAE, Iran and Egypt.

Africa and Latin America

- From Latin America, despite Brazil's reluctance, regional rival Argentina was selected as a new member. With a GDP of approximately US\$610 billion, Argentina is one of the largest economies in Latin America.
- From Africa, Ethiopia and Egypt made the cut, over Nigeria, Algeria and Senegal. Ethiopia is the second most populous nation in Africa after Nigeria, and one of the fastest-growing economies in the region.
- Egypt occupies a crucial geo-strategic location — 12% of global trade passes through the Suez Canal — and is a key player in the region.

Countries from Asia

- The inclusion of Saudi Arabia and the UAE is expected to lead to more mobilisation of financial resources for the New Development Bank, the BRICS alternative for developing countries.
- By including these four, BRICS has also addressed the question that no Muslim-majority country is in the grouping.
- One important point is that Saudi Arabia, UAE, Iran, Egypt and Ethiopia share a common regional space. The rivalries and geopolitical tensions here might play out in the grouping as well.
- These contradictions within the member countries could limit the potential of BRICS.

Russia, China's stakes

- With the expansion of the grouping, China is seen as trying to build its own bloc against the Western powers. But India has maintained that decisions have to be made "through consensus" — the guiding principle in the grouping so that it is not completely led by China.
- In fact, this inclusion of six members has been projected as the first phase of the expansion, which leaves room for a second phase.
- Russia will host the next BRICS summit in Kazan in 2024. It will use the opportunity to portray its relevance despite Western pressures.
- For India, the Chinese challenge remains the most pertinent. It needs to guard against the grouping being swayed by China, which wants to pack it with countries indebted to the latter.

France bans the Abaya in its public schools

Relevance: Prelims & Mains Paper II; Int. Relations



Why in news?

- France has banned the Abaya, a long, loose-fitting garment, from being worn in its public schools in view of the larger policy of secularism in the country, where a hard separation between the Church and the State is observed.
- As per the French Education Minister, "When you walk into a classroom, you shouldn't be able to identify the pupils' religion just by looking at them."
- Nearly 300 girls showed up wearing abayas, a week after the ban was announced. Most agreed to change their clothing, but 67 refused and were sent home.
- A challenge to the ban via a petition to the apex court of the country also failed when it ruled that the ban was not a "serious and obviously illegal infringement of a fundamental freedom".



What is the Abaya?

- A loose-fitting dress, the Abaya is worn by women. "The aba (or abaya) was of ancient origin and is mentioned in the Bible as the attire of Hebrew prophets".
- It is similar to some other free-flowing garments that are worn in parts of Africa and West Asia. Over the years there have been variations in its designs, with open Abayas worn on top of long skirts and pants.
- While associated with some regions of the world, Abaya is also described as clothing specific to Muslim women and draws comparisons to the Burqa (which is similar but also has a veil for the face) and the Chador (which is tied slightly differently).
- The garment has been common among women in Saudi Arabia, where conservative dressing in public is strictly enforced.

Why France doesn't allow religious clothing?



- The idea of secularism, of a separation between religious institutions and organs of the govt, is unique in its implementation.
- It has its origins in the French Revolution, which championed values of liberty, equality and fraternity. The role that religion might then play in public life, interfering with liberty, was seen with suspicion.
- Based on this principle, a law came into place in 2004. It said, "...the wearing of signs or outfits by which students ostensibly show a religious affiliation is prohibited." This did not mention specific clothing items but was interpreted as a ban on headscarves, caps like the Jewish Kippah and large Christian crosses.
- Following immigration into France from countries outside Europe in recent years, such issues have come up from time to time and often become contentious.
- Critics argue that they constitute policing of women's right to choose what they want to wear in particular, making it difficult for women from conservative backgrounds to participate in public life.
(more ahead)

Cont'd

- In 2010, a law banned any covering of faces by clothing in public, except when travelling as a car passenger or visiting a place of worship.
- Last year, France's highest administrative court upheld a ban on the full-body covering swimsuit known as burkini (from the words burqa and bikini) in the city of Grenoble.

Rising breaches to secularism

- Since the 2004 law doesn't mention particular items of clothing, whether certain clothes should be allowed or banned and can strictly be called religious clothing has been a grey area.
- As per the French govt, over the past months, breaches to secularism have increased considerably, in particular with [pupils] wearing religious attire like abayas and kameez.
- In 2022-2023, 4,710 cases were reported when compared with 2,167 the previous year. Over 40% of monthly reports now concern clothing that may be both cultural and religious – such as the kameez for men, or the abaya for women.

Russia steps up efforts to procure more arms from North Korea for Ukraine War

Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- A senior U.S. official recently noted that arms transfer negotiations between North Korea and Russia are "actively advancing" as the Russian president, Vladimir Putin, seeks to feed his war machine.
- Under an array of western-led sanctions, Russia and its military contractor, the Wagner Group, have already allegedly turned to North Korea for artillery shells and "infantry rockets and missiles" in the past year.
- While these sales may have an important impact on the battlefields of Ukraine, North Korea is likely to seek technology from Russia in exchange.
- This would be a huge boost to the North Korea's weapons programmes and, at the same time, greatly to the detriment of the UN sanctions regime that seeks to limit those programmes.



Kim Jong-un (left) and Vladimir Putin

Flourishing military relationship

- Recent developments have suggested a burgeoning arms trading relationship, despite denials from North Korea and the recently deceased Wagner Group owner, Yevgeny Prigozhin.
- In 2022, the U.S. suggested that North Korea was supplying Russia with artillery shells in “significant” numbers. It also shared satellite imagery of a train at the North Korean-Russian border carrying the deadly cargo.
- In July, the U.S. sanctioned a North Korean arms dealer for facilitating unspecified arms transfers to the Wagner Group.

‘Brothers in arms’

- It was, however, the visit of Sergei Shoigu, Russia’s defence Minister, to Pyongyang that was the most significant sign of a flourishing relationship. While attending a military parade, he was guided around an arms exhibition by the North Korean leader, Kim Jong-un.
- North Korean arms exports have grown steadily since the 1970s. Many transfers were made to Cold War ideological allies.
- Since 2006, North Korea has been under UN sanctions, imposed to counter the former’s weapons of mass destruction (WMD) programmes. The UN arms embargos have prohibited the import of all arms from North Korea since 2009.
- Though Russia – a UN security council permanent member with veto power – actively endorsed the creation of these sanctions, its implementation of these sanctions – alongside fellow permanent security council member China – has been far from assertive.
- Indeed, both countries have increasingly dragged their feet over further sanctions resolutions.

North Korea’s pursuit for tech

- Clearly, Russia stands to benefit on the battlefield in Ukraine. But its purchases will undermine the North Korea sanctions and help to generate revenue for the Kim regime. Notably, North Korea desperately wants commodities such as food, oil, fertiliser etc.
- But more worryingly, North Korea has long relied on arms sales to fund its weapons development – including its nuclear and long-range missile programmes. This has been termed “proliferation financing”. Great efforts have been made to encourage govts and the private sector around the world to implement UN sanctions.
- Russia has a vast military, nuclear and missile industrial complex, which could provide North Korea with much-needed technological fruits. Russia has shown itself to be a bountiful market for North Korean procurement.
- If Russia does move towards becoming a regular customer for embargoed North Korean arms, it will help Putin sustain his illegal war on Ukraine. But the potential technological pay-off for North Korea could pose longer-term hazards for the world.

Delhi all set to host G20 Summit



Relevance: Prelims & Mains Paper II; International Organisations

Why in news?

- Leaders from the most powerful nations in the world will flock to New Delhi for the G20 Heads of State and Government Summit to be held on September 9-10.
- The culmination of India's year-long presidency of the G20, the summit will be concluded with the adoption of a G20 Leaders' Declaration, which will state the participating leaders' commitment towards the priorities discussed and agreed upon during the respective ministerial and working group meetings.
- Notably, this year's theme is "Vasudhaiva Kutumbakam — One Earth, One Family, One Future".



What is the G20?

- The G20, or the Group of Twenty, comprises 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, U.K, and the U.S) and the European Union.
- These members represent around 85% of the global GDP, over 75% of global trade, and about two-thirds of the world population. As a forum for international economic cooperation, it plays an important role in shaping and strengthening global architecture and governance on all major international economic issues.
- Some of G20's major objectives are as follows:
 - Policy coordination between its members in order to achieve global economic stability, sustainable growth;
 - To promote financial regulations that reduce risks and prevent future financial crises; and
 - To create a new international financial architecture.

Origin



- The collapse of the Soviet Union in 1991, the emergence of the economies of Brazil, China and India and the Asian financial crisis of 1997 were key factors behind the idea of formation of a new world forum. Existing fora such as the G7, or international organisations such as the World Bank, were incapable of handling crises in the emergent global order.
- It was in late 1999 that the G20, with its current composition, was finally founded as an informal forum for Finance Ministers and Central Bank Governors of its members to meet annually.
- The first G20 Leaders' Summit was convened in Washington DC in 2008.

How does the G20 work?

- It is important to note that the G20 is an informal grouping. This means that unlike the United Nations (UN), it does not have a permanent secretariat or staff. Rather, the G20 presidency rotates annually among the members and is responsible for bringing together the G20 agenda, organising its workings and hosting summits.
- The presidency is supported by the “troika” – previous, current and incoming presidencies. India holds the presidency from December 1, 2022, to November 30, 2023 with the troika comprising Indonesia (the previous presidency), India, and Brazil (the incoming presidency).
- The G20 is also informal in another sense – while the decisions of the G20 are important, they do not get implemented automatically. Rather, the G20 is a forum where leaders discuss various issues and make pronouncements, which signals their intentions. Then, they are implemented by relevant nations or international organisations.
- For instance, if the G20 makes a pronouncement on trade, the actual implementation of the pronouncement will be done by an organisation such as the World Trade Organization (WTO).

How is the G20 presidency determined?

- The G20 presidency is rotated among its members who (except the EU) are divided into 5 groups.

Group 1	Group 2	Group 3	Group 4	Group 5
Australia	India	Argentina	France	China
Canada	Russia	Brazil	Germany	Indonesia
Saudi Arabia	South Africa	Mexico	Italy	Japan
USA	Türkiye		UK	South Korea

- The presidency rotates from group to group. However, each country within a group is eligible for presidency when it is their group's turn. Thus, the countries in the eligible group negotiate among themselves to determine the group's presidency.

The G20 Leaders' Summit

- The presidency is responsible for setting the G20 agenda for the year. This is done in consultation with other members as well as pertinent global developments.
- The president also gets to host various meetings and the G20 Leaders' Summit, which is the culmination of all the work done by the group at lower levels through the year.

Invitees for this year's summit

- In addition to the member countries, each year, the G20 president invites guest countries to participate in the G20 meetings and the Summit. This year, India has invited several countries such as Bangladesh, Egypt, Mauritius, the Netherlands, Nigeria, etc.
- Being the president, India has also invited certain international organisations (IOs) such as the International Solar Alliance (ISA), and the Asian Development Bank (ADB) as guest IOs. These are in addition to the regular G20 IOs (who participate every year) which include the UN, the International Monetary Fund (IMF), the World Bank (WB), the World Health Organization (WHO) etc.
- India has also invited the chairs of the following regional organisations (ROs): the African Union (AU), and the Association of Southeast Asian Nations (ASEAN) etc.
- Since the G20 does not have any direct power to govern or implement any pronouncements made, it depends on its members and IOs to do that. This is why it is crucial to involve IOs in the workings of the G20.

The 'workstreams' of the G20

Relevance: Prelims & Mains Paper II; International Organisations

Why in news?

- The 18th annual G20 Heads of State and Government Summit will take place at Pragati Maidan, in New Delhi on Sept. 9 and 10.
- Established in 1999, the G20, for about a decade worked, at the level of finance ministers and central bank governors only. After the financial and economic crisis of 2008, it became a leaders' forum.
- The summit is essentially the culmination of all the G20 processes and meetings held throughout the year in cities across the host country, among ministers, govt officials, and civil society members and organisations.



Structure of G20

- The G20 works in three major tracks — two of them are official and one is unofficial. The official tracks are the Finance Track and the Sherpa Track. The unofficial track includes engagement groups or civil society groups.

Finance Track



- The Finance Track is headed by the finance ministers and central bank governors, who usually meet four times a year, with two meetings being held on the sidelines of the World Bank and International Monetary Fund (IMF) meetings.
- It mainly focuses on fiscal and monetary policy issues such as the global economy, infrastructure, financial regulation, financial inclusion, international financial architecture, and international taxation.
- The Finance Track has eight working groups. They include Framework Working Group, International Financial Architecture Working Group, Infrastructure Working Group, Sustainable Finance Working Group, Global Partnership for Financial Inclusion, Joint Finance and Health Task Force, International taxation Issues, and Financial Sector Issues.

Sherpa Track

- The Sherpa Track was established after the forum became a leaders' summit in 2008. It consists of representatives of heads of state, and it focuses on socio-economic issues such as agriculture, anti-corruption, climate, digital economy, education, employment, energy, environment, health, tourism, trade, and investment.
- Each representative is known as a Sherpa — it is the metaphor from the mountaineering domain, where the Sherpa is supposed to do the heavy lifting or assist the mountaineer. There are 13 working groups within the Sherpa Track.
- They are: Agriculture Working Group, Anti-corruption Working Group, Culture Working Group, Development Working Group, Digital Economy Working Group, Disaster Risk Reduction Working Group, Education Working Group, Employment Working Group, Energy Transitions Working Group, Environment and Climate Sustainability Working Group, Health Working Group, Tourism Working Group, and Trade and Investment Working Group.

Engagement Groups



- The unofficial track comprises engagement or civil groups. These groups often draft recommendations to the G20 Leaders that contribute to the policy-making process.
- The engagement groups are as follows: Business20, Civil20, Labour20, Parliament20, Science20, SAI20, Startup20, Think20, Urban20, Women20, and Youth20.

G20 New Delhi Leaders' Declaration



Relevance: Prelims & Mains Paper III; Disaster Management

Why in news?

- The leaders at India's showpiece G20 Summit arrived at a joint **communique** — called the **G20 New Delhi Leaders' Declaration**.
- The **big sticking point** was the **Ukraine-Russia conflict**, which was **addressed in detail in seven paragraphs**. This is **much more elaborate** than the **Bali Declaration**, which had **just two paragraphs**.
- The consensus at the Bali declaration **broke down within a month of the Summit in November last year**, and the last nine months witnessed acrimony on both sides — the **G7 grouping** on one side and **Russia-China bloc** on the other.
- But, after **months of work**, and **hours of painstaking negotiations** towards the end, the two sides managed to build a **consensus formula**.



A 'win-win' on the Ukraine question

- The **Russia-Ukraine paragraphs** did not condemn Russia for its actions, nor did it call it an "aggression". But the West also got what it wanted.
- The statement says that **all states must refrain from conquering territories by force**. Russia is the only country to have done so. All this helps to build consensus for the future.
- Notably, **India played a special role in this process**.

A whole new format!

- The **aforesaid declaration** is filled with deliverables on a range of issues.
- It is also crafted in a **different way** — not the usual **paragraphs** that are structured in a **joint declaration**. Instead, it starts with a **preamble**, and then has **10 chapters**, and ends with a **conclusion**.
- The chapters are numbered **A to J**, in **10 chapters**, based on **themes**.



Progress for all; focus on education, health

- The first chapter talks about the global economic situation, advancing financial inclusion, and fighting corruption. It vows to implement the Action Plan against Fugitive Economic Offenders that will help strengthen international cooperation and information sharing among law enforcement agencies to combat corruption.
- The next chapter is about eliminating hunger and malnutrition, health collaboration and delivering quality education among others.
- One of the important elements is on how future pandemics can impact the economy, which also brings out the gaps in the existing pandemic response mechanism, including institutional and funding arrangements.
- On education, it talks about enhancing teachers' capacity, improved curricula, content in local language, and access to digital resources.

Future is now: Sustainability, chips...

- Another chapter stresses the need to implement clean, sustainable, just, affordable, and inclusive energy transitions.
- One important element is the mention of the need to build reliable, diverse, responsible, and sustainable value chains of critical minerals, semiconductors, and related technologies.
- The next chapter speaks of reforming international financial institutions. One of the most important elements is that reform of the UN Security Council was agreed to for the first time in the G20; and there was a strong push towards reforms for better, bigger, and more effective Multilateral Development Banks (MDBs).

Digital infrastructure, and a safe, secure Internet

- Another chapter contains elements of building digital public infrastructure, crypto-assets, and harnessing Artificial Intelligence (AI) responsibly for Good and for All.
- The G20 leaders agreed on a G20 framework for digital public infrastructure and Global Digital Public Infrastructure Repository (GDPIR).
- The Leaders' Declaration also talks about a comprehensive toolkit which is aimed at improving cyber education and cyber awareness for the protection and empowerment of children and youth.

Focus on gender equality, and denouncement of terror

- The Declaration promotes equal rights to economic resources, property ownership, financial services, and inheritance for women, while supporting women's organisations and networks.
- Under India's G20 Presidency, a decision to create a full-fledged working group on women's empowerment has been made. The group will prioritise gender equality, women's empowerment, and leadership, and bring convergence across sectors at all levels.
- Another chapter contains a strong condemnation of terrorism in all its forms and manifestations and a positive message towards international peace and security.

Inclusion of Africa; a diverse, tolerant grouping

- The last chapter has **two important elements**:
- One, India's G20 Presidency has paved the way for the African Union's permanent membership in the G20. This will make G20 more inclusive, deepen cooperation with Africa, and help realise its developmental aspirations.
- Second is a commitment to promote respect for religious and cultural diversity, and deploring all acts of religious hatred, including against religious symbols and holy books.

MoU signed to establish India-Europe Economic Corridor

Relevance: Prelims & Mains Paper II; Int. Relations

Why in news?

- On the sidelines of the G20 Summit in New Delhi, a Memorandum of Understanding (MoU) was signed between the Govts of India, the US, Saudi Arabia, the European Union, the UAE, France, Germany and Italy to establish the India – Middle East – Europe Economic Corridor (IMEC).
- The IMEC is being envisioned as a network of transport corridors, including railway lines and sea lanes, that is expected to aid economic growth through integration between Asia, the Arabian Gulf, and Europe.
- This project is a part of the Partnership for Global Infrastructure Investment (PGII).

Partnership for Global Infrastructure Investment (PGII)

- The PGII was officially launched in 2022 during the G7 summit in Germany. The G7 countries include the United Kingdom, the United States, Canada, France, Germany, Italy, Japan, and the European Union (EU). This infrastructure plan is a joint initiative to help fund infrastructure projects in developing countries through public and private investments.
- PGII aims to mobilise nearly \$600 billion from the G7 by 2027 to invest in critical infrastructure.
- Notably, PGII was launched by the G7 as an alternative mechanism to the infrastructure projects being undertaken and funded by China under the Belt and Road Initiative (BRI) at a global level.
- The stated purpose of both the PGII and the BRI is to help secure funding for countries to build critical infrastructure such as roads, ports, bridges, communication setups, etc. to enhance global trade and cooperation.

Need for an alternative!

- China began the Belt and Road Initiative in 2013 under its President Xi Jinping. It aims to revive the ancient trade routes crossing to and from China—from Rome in Europe to East Asia. Under this, the Chinese govt helped in providing loans for infrastructure projects to various countries, and in many cases, Chinese companies were awarded contracts for carrying out the work. This helped China mark its footprints at a global level.
- However, China was criticised in the West and by some other countries for providing unsustainable debts to countries that will be unable to repay them. According to a 2019 World Bank report, among the 43 corridor economies, 12 could face a situation where debts were not sustainable, which could lead to public assets being handed over to foreign contractors or China itself.
- The report added that if issues of environmental degradation, high debts, and corruption are successfully countered and the BRI is fully implemented to its potential, it could increase trade between 1.7 and 6.2% for the world, increasing global real income by 0.7 to 2.9%. China has claimed the BRI has made economic gains and helped in job creation.
- India, however, opposed the BRI as it included the China-Pakistan Economic Corridor, which connected Kashgar in China with the Gwadar port in Pakistan via Pakistan-occupied Kashmir.
- Others are wary of the benefits they might reap from enhanced trade connectivity. Italy, the only G7 member that was part of the BRI, has also expressed its concerns in this regard.
- However, the G7 say their initiative is meant to be transparent, focused on building climate change-resilient infrastructure, and help in achieving objectives of gender equality and health.

PM Modi launches Global Biofuels Alliance (GBA)

Relevance: Prelims & Mains Paper II; Int. Relations

Why in news?

- PM Narendra Modi recently announced the launch of Global Biofuels Alliance (GBA) on the sidelines of the G20 Summit. 19 countries and 12 international organisations have already agreed to join the alliance.
- GBA is an India-led Initiative to develop an alliance of govts, international organizations and industry to facilitate the adoption of biofuels.
- Bringing together the biggest consumers and producers of biofuels to drive biofuels development and deployment, the initiative aims to position biofuels as a key to energy transition and contribute to jobs and economic growth.

Details

- GBA is supported by G20 Nations & energy related global organisations like International Energy Agency (IEA), International Civil Aviation Organization (ICAO), World Economic Forum (WEO), and World LPG Association among others.
- It will strengthen global biofuels trade & best practices allowing the members to successfully face the Energy Quadrilemma.
- GBA will support worldwide development and deployment of sustainable biofuels by offering capacity-building exercises across the value chain, technical support for national programs and promoting policy lessons-sharing.
- It will facilitate mobilizing a virtual marketplace to assist industries, countries, and ecosystem players in mapping demand and supply, as well as connecting technology providers to end users.
- GBA will also facilitate development, adoption and implementation of internationally recognized standards, codes, sustainability principles and regulations to incentivize biofuels adoption and trade.

Potential benefits for India

- GBA will be beneficial for India at multiple fronts. As a tangible outcome of the G20 presidency, it will help strengthen India's position globally.
- Moreover, the alliance will focus on collaboration and will provide additional opportunities to Indian industries in the form of exporting technology and exporting equipment.
- It will help accelerate India's existing biofuels programs such as PM-JIVANYojna, SATAT, and GOBARdhan scheme, thereby contributing to increased farmers' income, creating jobs and overall development of the Indian ecosystem.
- As per the govt, this will bolster the transformation of Indian farmers from 'Annadatas to Urjadas' as an additional source of income. It claims to have provided ₹71,600 cr to its farmers in the last 9 years.
- With E20 implementation by 2025, India will save about ₹45,000 cr in oil imports and 63 MT of oil annually.

Facts and figures



- The global ethanol market was valued at USD 99.06 billion in 2022 and is predicted to grow at a CAGR of 5.1% by 2032 and surpass USD 162.12 billion by 2032.
- As per IEA, there will be 3.5-5x biofuels growth potential by 2050 due to Net Zero targets, creating a huge opportunity for India.

Italy to walk out of China's Belt and Road Initiative

Relevance: Prelims & Mains Paper II; International Relations



Why in news?

- Amid Italian media's speculations that Italy was planning to leave China's Belt and Road Initiative (BRI), the country's prime minister Giorgia Meloni has said that "there was more to Italy's relationship with China than the BRI".
- Meloni who met Chinese Premier Li Qiang on the sidelines of the G20 summit in New Delhi clarified that a final decision on whether to leave the BRI was still to be taken.
- Italy is the only G7 country (the grouping of advanced economies of US, the United Kingdom, Canada, France, Germany, Italy, and Japan, with the European Union as a "non-enumerated" member) to sign up for the BRI, which it did in 2019.
- China's ambitious Belt and Road Initiative is a massive trade and infrastructure network that seeks to connect the country with the West in a model based on the ancient Silk Route.
- Under the initiative, pushed by the Xi Jinping regime, China has built or financed bridges, roads, ports, and even laid down digital connectivity networks in partner countries.



Giorgia Meloni at the G20 summit

Why does Italy want to leave the BRI?

- Italy had joined the BRI at a time it was desperate for investment and infrastructure building, having survived three recessions in 10 years.
- Its govt at the time did not share warm relations with the EU, and was happy to turn to China for the funds it could pump in.
- Four years later, the agreement hasn't done much for Italy. According to figures, Chinese FDI in Italy dropped from \$650 million in 2019 to just \$33 million in 2021.
- In fact, Italy invested far more in non-BRI countries in Europe. In terms of trade, since joining BRI, Italy's exports to China increased from 14.5 billion euros to a mere 18.5 billion euros, while Chinese exports to Italy expanded from 33.5 billion euros to 50.9 billion euros.
- However, despite these obvious problems, if Italy walks out of the deal, the reason won't be just economics.

BRI amid changing geopolitics

- For China, a G7 country joining the BRI had been a big diplomatic win, and Italy walking out just ahead of the initiative's 10th anniversary will be a loss of face.
- This will be in line with Europe's increasingly cautious stand towards China.
- While the US-China ties have been rocky for years now, many countries in Europe continued to maintain close economic and trade links with China. The Russia-Ukraine war, China's perceived staunch support of Vladimir Putin, and geopolitical rivalries taking the form of trade sanctions have forced a rethink.
- In April, EU-China Comprehensive Agreement on Investment (CAI) collapsed. Last year, Estonia and Latvia quit the 17+1, China's diplomatic push in Central and Eastern European countries. Lithuania had walked out in 2021.
- Italy too has been gradually hardening its stance against China, especially after Meloni came to power. Her govt has restricted a Chinese firm's influence on Italian tiremaker Pirelli.

(more ahead)

Cont'd

- Italy has the G7 presidency next year, and walking out of the BRI will sit well with its Western allies.
- The BRI, too, has attracted negative press over the years. Many countries that joined it enthusiastically now find themselves staring at a massive debt burden to China.
- As per an analysis, a dozen countries most indebted to China — including Pakistan, Kenya, Zambia, Laos and Mongolia found that paying back the debt is consuming an ever-greater amount of the tax revenue and draining foreign currency reserves.
- Notably, China is reluctant to forgive debt and maintains extreme secrecy about how much money it has loaned and on what terms. This has kept other major lenders from stepping in to help these countries.
- Recently, the West has come out with its own initiative for funding infrastructure projects across the world, seen as a counter to the BRI —the Partnership for Global Infrastructure Investment (PGII).

BRI and India

- India does not support the BRI, and has declined to join the project. The major reason for this is that the BRI passes through Indian territory illegally held by Pakistan.
- The arm of the BRI project that links mainland China to the Arabian Sea runs from Kashgar in China's Xinjiang Uighur Autonomous Region to Gwadar port in southwestern Baluchistan in Pakistan.
- The project enters Indian territory occupied by Pakistan in Gilgit Baltistan, and traverses the entire length of Pakistan from north to south before reaching the Arabian Sea.
- This arm of the BRI is called the China-Pakistan Economic Corridor, or CPEC, and consists of multiple modern highway and railway projects.
- India has repeatedly voiced its concern and opposition to the CPEC, and flagged the violation of international law in its building by China and Pakistan.

PM Modi, Saudi Crown Prince MBS chair India-Saudi Arabia Strategic Partnership Council



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- Saudi Arabia's Crown Prince Mohammed bin Salman Al Saud and PM Narendra Modi recently held extensive talks, agreeing to expand trade and security ties. The leaders also co-chaired the first summit-level meeting of the India-Saudi Arabia Strategic Partnership Council (SPC).
- This comes after the G20 summit in New Delhi saw the announcement of a vastly significant India–Middle East–Europe Economic Corridor (IMEC).
- The India-Saudi Arabia Strategic Partnership Council was set up in 2019, making India the fourth country with which Saudi Arabia formed such a partnership, after the UK, France, and China.



What is the India-Saudi Arabia Strategic Partnership Council?



- The pact to establish the SPC was signed during PM Modi's visit to Saudi Arabia in 2019.
- The SPC has two main pillars: Committee on Political, Security, Social and Cultural Cooperation; and Committee on Economy and Investments.
- India and Saudi Arabia have identified 41 areas of cooperation under the four broad domains: Agriculture & Food Security; Energy; Technology & IT; and Industry & Infrastructure.
- During the latest meeting, the two sides decided to speed up implementation of the \$50-billion West Coast refinery project. It is a 60 million tonnes refinery-cum-petrochemical complex to be built on the Maharashtra coast, by Indian State owned oil companies - IOC, BPCL and HPCL, and Saudi Arabian Oil Co (Saudi Aramco) and Abu Dhabi National Oil Co (Adnoc).

The importance of Saudi Arabia to India



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- The Saudi Crown Prince Mohammed bin Salman (MBS) recently visited New Delhi for the G20 Leaders' Summit. There he, along with PM Narendra Modi and President Joe Biden, announced the India-Middle East-Europe Economic Corridor, a massive infrastructure project that would connect India to Europe via West Asia, and could rival China's Belt and Road Initiative.
- MBS stayed back after the Summit for a State Visit, and co-chaired with Modi the first meeting of the India-Saudi Arabia Strategic Partnership Council.
- The two sides signed eight agreements, including on upgrading their hydrocarbon energy partnership to a comprehensive energy partnership for renewable, petroleum and strategic reserves, and to create a joint task force for \$100 billion in Saudi investment.
- They also discussed the possibility of trading in local currencies, and expediting negotiations for a free trade agreement between India and the Gulf Cooperation Council of which Saudi Arabia is a member.
- PM Modi described Saudi Arabia as one of India's most important strategic partners.

Strengthening old ties

- The two countries established diplomatic relations in 1947. They have always enjoyed cordial and friendly relations that reflect their socio-cultural and economic ties going back centuries.
- The visit of King Abdullah to India in 2006 was a watershed moment in the relationship. This visit resulted in the signing of the Delhi Declaration, which was followed in 2010 by the Riyadh Declaration that elevated bilateral ties to a strategic partnership.
- During PM Modi's 2016 visit to Riyadh, King Salman conferred on him, the kingdom's highest civilian honour, the King Abdulaziz Sash.
- In 2019, it was announced that Saudi Arabia would invest about \$100 billion in India. In the same year, the Strategic Partnership Council (SPC) Agreement was signed, which established a high-level council to steer the Indo-Saudi relationship.



Prince Mohammed bin Salman (MBS) with PM Modi

Four pillars of India-Saudi Arabia relationship:

Economic Ties

- India is Saudi Arabia's second-largest trade partner; Saudi Arabia is India's fourth-largest trade partner. Bilateral trade in FY2022-23 was valued at \$52.76 billion.
- Trade with Saudi Arabia accounted for 4.53% of India's total trade in FY23.
- Saudi direct investments in India amounted to \$3.15 billion (as of March 2022).
- Saudi Arabia's Public Investment Fund (PIF) has invested in several Indian startups such as Delhivery, FirstCry, Grofers, Ola, OYO, Paytm, and PolicyBazaar through SoftBank Vision Fund.

Energy cooperation

- Saudi Arabia is a key partner for ensuring India's energy security, and was its third largest crude and petroleum products source for FY23.
- India imported 39.5 million metric tonnes (MMT) of crude from the country in FY23, amounting to 16.7% of India's total crude imports.
- India's LPG imports from Saudi Arabia stood at 7.85 MMT, and 11.2% of its total petroleum product imports, in FY 23.

Defence partnership

- The defence partnership between India and Saudi Arabia has witnessed tremendous growth in recent years.
- There is extensive naval cooperation between the two countries. Two editions of the bilateral naval exercise, Al Mohed al Hindi, have been concluded so far. Both sides also cooperate closely in the domain of defence industries and capacity-building.

Indians in Saudi

- The Indian community in Saudi Arabia is more than 2.4 million strong. It is widely respected for its contribution to the development of Saudi Arabia.
- Notably, Saudi Arabia actively supported the evacuation of Indian nationals stranded in Sudan through Jeddah under Operation Kaveri.

The importance of MBS

- After being named Prime Minister, a post traditionally held by the King, Crown Prince Mohammed bin Salman has consolidated his power. At age 38, he is Saudi Arabia's de facto ruler, and has been first in line to succeed his ailing father as King since 2017.
- Through his Vision 2030, MBS has positioned himself as Saudi Arabia's reformer-in-chief. He has ensured significant changes in the country's ultra-conservative society, where women have got the right to drive, and where cinemas have been opened, foreign tourists are welcomed, and pop stars and high-profile sports matches have been hosted.
- MBS has engaged with China, he is moving towards rapprochement with Iran and Israel, and is also now consolidating the Saudi partnership with the US, India, and Europe.

India and Saudi Arabia seek revival of the stalled west coast mega refinery project

Relevance: Prelims & Mains Paper II; Bilateral Relations

Why in news?

- India and Saudi Arabia have decided to intensify efforts to accelerate the implementation of the proposed 60-million-tonnes-per-annum (60 mtpa) west coast mega refinery project that has been hanging fire for years.
- The ambitious project to build the mega oil refinery and petrochemicals facility in Maharashtra's Konkan belt with proposed participation from Saudi Arabia and the United Arab Emirates never really took off. This is despite the fact that funds to the tune of \$50 billion are already earmarked for this project.

The background

- This project was first proposed in 2015 as a joint effort by India's public sector refiners to build one of the largest refining complexes globally.
- In 2018, Saudi Aramco, the national oil company of Saudi Arabia, signed a preliminary deal to partner the main project proponents — India's public sector refiners Indian Oil Corporation (IOC), Bharat Petroleum Corporation (BPCL), and Hindustan Petroleum Corporation (HPCL) — to build this refinery.
- At the time, the project cost was estimated at Rs 3 lakh crore. The same year, ADNOC was also roped in to jointly pursue the project with Aramco and the Indian companies. The latter had already incorporated a joint venture (JV) — Ratnagiri Refinery & Petrochemicals (RRPCL) — to implement the project.

Significance

- India is the world's third-largest consumer of crude oil. Its demand for petroleum fuels, products, and petrochemicals is expected to grow substantially over the coming years and decades. In fact, as per various estimates, India is set to soon eclipse China to emerge as the largest driver of the global oil demand.
- As a consequence, India and its refiners, particularly public sector players, have big plans to increase refining and petrochemicals capacity in line with the likely increase in demand. Alongside, India also has ambitions to become a global refining hub and step up petroleum product and petrochemical exports. The aforesaid project would be the single biggest proposed greenfield refinery project in India which aims to increase its refining capacity to 450 mtpa from the current 250 mtpa over the next few years.
- For Aramco and ADNOC, the project offers prospects of increasing diversification, expanding their global footprint, and ensuring offtake of their oil in a major market.
- India depends on imports to meet over 85% of its crude oil requirement, and Aramco and ADNOC feature among the top oil suppliers to India.
- As per the agreement, Aramco and ADNOC were to take a 50% stake in RRPCL, However, with the project implementation not taking off, they have not done so.

Project status: stuck on runway!

- Back in 2015, three states — Gujarat, Maharashtra, and Tamil Nadu — were seen as the major contenders for the mega coastal refinery that the new govt at the Centre was planning. The Maharashtra govt, then under Devendra Fadnavis, managed to bag the project. Nanar in the Konkan region's Ratnagiri district was chosen for the project. But the plan soon hit a major roadblock as a large number of locals strongly opposed the project and declined to give up their land for it.
- Around 15,000 acres of land had to be acquired for the project. The key fear among the locals was that a mega oil refinery could pollute and damage the region, dealing a body blow to cultivation of the famed alphonso mangoes and cashews, along with hitting the local fishing industry.
- Shiv Sena which enjoys strong political support in the Konkan region put the scrapping of the Nanar site as a pre-condition for an alliance with the BJP in the 2019 Lok Sabha polls. It was then decided that an alternate site for the project would be explored, most likely in the Raigad district.
- However, after the Shiv Sena and the BJP fell out in 2019, the Maha Vikas Aghadi (MVA) govt recommended Barsu in Ratnagiri district as the new site for the project. There too, a section of the locals are up in arms against the project. Interestingly, the out-of-power Uddhav Thackeray is now opposing the proposed refinery arguing that the project must not come up against the will of the locals.
- In April this year, protests broke out in the area against the soil testing activity for the project. With the Lok Sabha polls just a few months away, the project again seems to be getting caught in political crossfire, which is again casting a shadow on its future.

Future and options

- With a renewed push at the govt-to-govt level between India and Saudi Arabia, there is renewed optimism among the project's participants and supporters.
- Realistically, if the project fails to take off at the proposed site in Ratnagiri, there are only a handful of practical alternatives to salvage it. None is an easy fix and all would be fraught with challenges of their own.
- The govt and the oil companies could scout for an alternative coastal site within Maharashtra. Over the years, sites in other coastal districts of Maharashtra like Sindhudurg and Raigad were evaluated for the project, but the sites in Ratnagiri were finalised on both occasions.
- The other option would be to consider another coastal state for the project, preferably along the west coast due to its maritime proximity to West Asia, given the participation of Aramco and ADNOC in the project.

Kim Jong Un meets Putin, likely seeks advanced weapons technologies

Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- The North Korean leader Kim Jong Un and Russian President Vladimir Putin recently got together at a rocket launch facility in the Russian Far East. This was their first summit in four years.
- The talks between the isolated, nuclear-armed leaders focused on expanding the military cooperation of two countries in intensifying confrontations with the West.
- The venue of this meeting may communicate what Kim sees as the crucial next steps in his efforts to build a viable nuclear arsenal that could threaten the U.S. and its allies in Asia.
- With the ability to supply vast stockpiles of munitions needed by Russia for its war in Ukraine, Kim in exchange may have sought badly needed economic aid and sophisticated weapons technologies to advance his military nuclear program.



Spy satellites

- Kim's visit to Russia came after North Korea experienced repeated failures to put its first military spy satellite into orbit. Though it has vowed to make a third try for the spy satellite, there are questions over whether its newly developed satellite would be sophisticated enough to monitor U.S. and South Korean military movements.
- Kim has used the international distraction caused by Putin's war on Ukraine to ramp up his weapons demonstrations, test-firing more than 100 missiles since 2022.
- Space-based reconnaissance capabilities would potentially enhance the threat posed by Kim's missiles. Notably, he has also authorized his military to conduct preemptive nuclear attacks against enemies if it perceives North Korea's leadership as under threat.
- The UN Security Council imposed economic sanctions on North Korea over its previous satellite launches, seeing them as covers for long-range ballistic missile tests.

Intercontinental ballistic missiles



- Kim's space ambitions are likely tied to his efforts to develop more powerful intercontinental ballistic missiles (ICBMs) that are designed to reach the US mainland.
- This year, North Korea flight-tested its most advanced missile yet, the Hwasong-18, which demonstrated a potential range to reach deep into the US mainland.
- However, it's unclear if the country has acquired the technology to ensure that the warheads would survive the harsh conditions of atmospheric re-entry to strike targets.
- Some experts suspect that's an area where the North might ask for Russian help.

Submarines

- Some analysts say Kim may also want Russian help in developing ballistic-missile submarines and nuclear propulsion submarines.
- In recent years, North Korea tested a variety of missiles designed to be fired from submarines. Such capacity would bolster its deterrent by ensuring a survivable capability to retaliate after absorbing a nuclear attack on land.
- Still, it would take considerable time, resources and technological improvements for North Korea to build a fleet of submarines that could travel quietly and execute attacks reliably.
- However, analysts say such capacities would likely be unfeasible for North Korea without external assistance.

Conventional weapons



- Some analysts question whether Russia, which has always closely guarded its most important weapons technologies, even from key partners like China, would be willing to share them with North Korea.
- As per South Korean analysts, the military cooperation between Russia and North Korea was more likely to center around conventional capabilities.
- Russia could possibly help North Korea improve its badly aged air force or provide anti-aircraft missiles to strengthen the latter's defence.

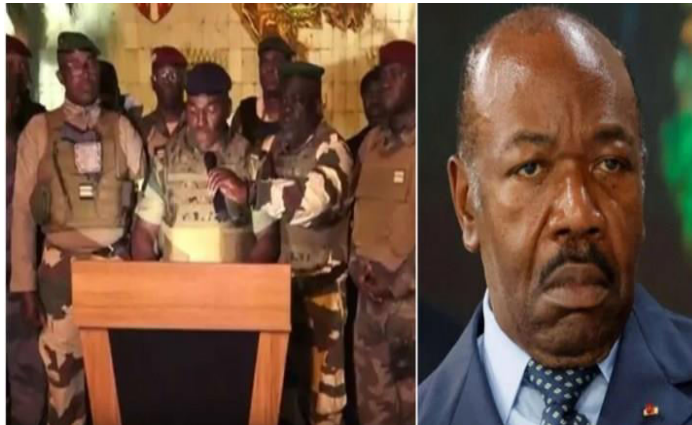
Military officers seize power in Gabon hours after a disputed election win



Relevance: Prelims & Mains Paper II; Governance

Why in news?

- Military officers in the oil-rich Central African nation of Gabon have claimed that they have seized power. Thus, they have overturned the results of a disputed election that returned the incumbent, President Ali Bongo Ondimba, to a third term in office.
- If it succeeds, the coup in Gabon would be the latest in an extraordinary run of military takeovers across a swath of Africa — at least nine in the past three years.



An end to dynastic rule

- Many Gabonese cheered the apparent demise of a family dynasty that has dominated for a half-century.
- Ali Bongo has ruled Gabon since 2009, when he took over from his father, Omar Bongo, who took power in 1967. Ali Bongo presided over a regime accused of cronyism and corruption in a country where only a minority has shared in its great wealth. Nearly 40% of people between the ages of 15 and 24 are unemployed. Public anger has been simmering for years.
- Ali Bongo has remained a close ally of France whose companies dominate Gabon's oil industry. A member of OPEC, Gabon is Africa's 7th-largest oil producer.
- This coup is a new blow to French interests in Africa, following recent takeovers in Mali, Burkina Faso and Niger.

Widespread Condemnation



- The coup met with instant and near-universal international condemnation. While the French govt has demanded the election results be respected, China, which accounts for about half of Gabon's exports, has expressed concern. So did Russia, which in recent years has benefited from several African coups by deploying Wagner mercenaries to prop up shaky military regimes.

India gets the authority to issue OIML certificates

Relevance: Prelims & Mains Paper II; Int. Organisations



Why in news?

- India has become an OIML certificate-issuing authority.
- The Legal Metrology Division, Department of Consumer Affairs, is now authorised to issue OIML certificates.



What is the OIML?

- The OIML stands for International Organisation of Legal Metrology. Established in 1955 and headquartered in Paris, the OIML is an international standard-setting body.
- It develops model regulations, standards and related documents for use by legal metrology authorities and industry.
- It plays a crucial role in harmonising national laws and regulations on performance of measuring instruments like clinical thermometers, alcohol breath analysers, radar speed measuring instruments, ship tanks found at ports, and petrol dispensing units.
- India became a member of the OIML in 1956. In the same year, India signed the metric convention.

What is the OIML certificate?



- The OIML-CS is a system for issuing, registering and using OIML certificates, and their associated OIML type evaluation/test reports, for instruments like digital balance, clinical thermometers, etc.
- With the addition of India, the number of countries authorised to issue OIML certificates has increased to 13.
- OIML certificate is a single certificate accepted worldwide. For e.g, suppose there is an equipment-manufacturer making digital balances in Noida, and he wants to export it.
- Earlier, he would be required to go to one of the 12 other countries for certification. Now, the certificates can be issued in India and the equipment will be exportable, acceptable to the entire world.

Benefits for India

- This move is expected to **help the Indian economy in several ways**, including **increase in exports**, **earning of foreign exchange**, and **generation of employment**.
- Since only few countries are authorised, **neighboring countries and manufacturers can come to India to get their certification done**.

India-Canada ties hit rock-bottom over India's alleged role in Khalistani leader's murder

Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- India and Canada are dealing with an unprecedented diplomatic crisis, which **can have political as well as geopolitical consequences**.
- It started **after Canada's Prime Minister Justin Trudeau dropped a bombshell allegation earlier this week, telling Parliament that it is possible the Indian govt had a hand in the murder of a Khalistani separatist - Hardeep Singh Nijjar in Canada in June**.
- He said **he had taken up the issue with PM Narendra Modi during his recent visit for the G20 Leaders' Summit**. At their bilateral meeting in New Delhi, **Modi had raised the concerns about pro-Khalistan elements in Canada**.
- The Ministry of External Affairs called **Trudeau's accusation "absurd and motivated"**. It said he had made **similar allegations during his meeting with the PM**, which had been **"completely rejected"**.



INDIA AND CANADA, IN NUMBERS

Canada accounts for just 0.56% of the total FDI in India.



DPIIT data show total FDI equity inflow between April 2000 to June 2023 was \$645,386.0884 mn, of which only \$3,642.5243 mn came from Canada.

But Canada is home to 5.26% of overseas Indians



Of the 3,21,00,340 overseas Indians, 5.26% (16,89,055) are in Canada, including 1,78,410 NRIs and 15,10,645 PIOs, according to MEA data.

And every 7th Indian student abroad is in Canada



In 2022, of the estimated 13,24,954 Indian students abroad, 13.83% (1,83,310) were in Canada, according to Ministry of External Affairs data.

Canada is 4th largest source of tourists in India (2021)



Canada accounted for 5.3% (80,437) of Foreign Tourist Arrivals (FTAs) in India in 2021; 72.6% of Canadian FTAs were members of the Indian diaspora. FTAs from Canada rose to 3,51,859 in the pre-pandemic year 2019 from 88,600 in 2001. Arrivals from Canada fell sharply post pandemic.

Bilateral trade is tiny; its balance is in India's favour



India's trade with Canada was \$8,161.02 mn during FY 2022-23, just 0.70% of India's total trade of \$1,165,000.88 mn. Canada was India's 35th biggest trading partner. The balance of trade is in India's favour; in 2022-23, India's exports to Canada stood at \$4,109.74 mn, and imports at \$4,051.29 mn.

HARIKISHAN SHARMA

Diplomatic moves and counter moves

- Canada took the first step, expelling an Indian diplomat posted in Ottawa. The official was identified as the head of the Indian intelligence agency, and his identity was revealed. India responded by expelling a Canadian diplomat based in New Delhi.
- India then issued a travel advisory for Indian nationals travelling to Canada, as well as a caution for the Indian community in Canada. Students, professionals, and tourists were asked to be cautious because, the advisory said, the Indian community could be targeted.
- Soon, India suspended visa services in Canada. E-visa services were stopped too, and Canadian citizens who apply from other countries will also not get a visa for India.
- India asked Canada to cut the number of its diplomats in India, saying there are more Canadian diplomats in India than there are Indian diplomats in Canada.

Potential consequences!

- India has in essence been accused of the extra-judicial killing of a foreign citizen in a foreign land. If Canada can provide compelling evidence in this regard, it could potentially damage India's post-G20 reputation as a strong voice for democracy and a global consensus builder. But India remains innocent until proven guilty.
- Canada has asked India to cooperate in the investigation. India has said it would "look into" any "specific information shared" by Canada.
- But it has also called Canada a "safe haven" for "terrorists, extremists and organised crime". Such descriptions are usually reserved for Pakistan and Afghanistan, and it is rare for India to use them for a western democracy.
- India has had diplomatic standoffs earlier — with the U.S. on the Devyani Khobragade issue, with Italy on the Italian marines issue, with Norway on the child services issue, and with Denmark over the extradition of the Purulia arms drop accused. But the current situation is qualitatively different and much more serious because of the nature of the allegation that Canada has made.

The Khalistan problem

- The aforesaid crisis underlines the resurfacing of the problem of Khalistan in India-Canada relations after having gone under the radar after the 1980s.
- Over the past few decades, the challenges in the relationship were different — a low point came after the nuclear tests in 1998 when Canada, an advocate of nuclear non-proliferation, criticised India heavily.
- The big issue for India is the safe haven that Canada has provided to separatist Khalistani groups, and what India sees as the Liberal Party's pandering to these groups for votes.
- Estimates suggest there are 20-25 constituencies where these votes are crucial — and that explains the Trudeau government's soft-peddling on India's concerns. Jagmeet 'Jimmy' Dhaliwal, whose New Democratic Party supports Trudeau's minority govt in Parliament, is viewed with suspicion by the Indian establishment for its pro-Khalistan sympathies — some in India even call him an activist.
- The so-called Khalistan "referendum", supported by Pakistani intelligence agencies, has been a major irritant in recent years. India objected to Canada permitting the secessionist "referendum" among the Sikh diaspora and warned against hate crimes — however, Canada chose not to act, citing freedom of expression and the right to protest.
- Diplomats who have dealt with Canada say the country — which is home to large numbers of immigrants from various countries — is hostage to immigrant interests in its foreign policy. Thus, Ukrainian and Russian immigrants and refugees often shape Canada's Russia policy; Hong Kong and Taiwan immigrants shape its China policy; and Sri Lankans influenced its Sri Lanka policy during the LTTE conflict.

(more ahead)

Cont'd

- These diplomats say the pro-Khalistan elements — who are actually a small minority in the Canadian Sikh community — have hijacked the Trudeau government's India policy.
- Estimates suggest that of the about 20 lakh Indian diaspora, only about 8 lakh are Sikhs. Of which, Indian estimates say, only about 1% — 8,000-9,000 people — are pro-Khalistan radicals.
- But this small population of Khalistanis control 12-15 gurdwaras, where they generate funds and organise political mobilisation by voting collectively for Canadian political candidates. The constituencies in which they have a say are mostly in Brampton in Ontario province, and Vancouver and Surrey in British Columbia.

The geopolitical scenario

- Canada is an important strategic partner for major western powers — it is part of the G7 grouping and shares the table with the US, UK, Germany, France, Italy, and Japan. It also shares intelligence with the Five Eyes grouping — with the US, UK, Australia, and New Zealand.
- All these countries are also close strategic partners of choice for India. India has the Quad partnership with the US, Australia, and Japan, and strong and growing bilateral ties with each of them.
- The diplomatic standoff has put these countries in a spot — they don't want to be in a position where they have to choose between Canada and India. The US, Australia, and UK have issued measured and nuanced statements; the rest haven't responded yet.

China denies entry to three Arunachal athletes from the Hangzhou Asian Games



Relevance: Prelims & Mains Paper II; International Relations

Why in news?

- The Asian Games, which were opened on Sept 23 by Chinese President Xi Jinping in Hangzhou are meant to showcase a broader message of Asian solidarity.
- However, it has so far proved otherwise! The day before the opening, Union Sports Minister Anurag Thakur cancelled his visit to China as a mark of protest to the last-minute denial of entry to three Indian Wushu players from Arunachal Pradesh.
- The three athletes were given the accreditation needed to travel along with the rest of the Indian team for the Games. However, in what appears to be a directive issued to the airline by China, the athletes were told they could not board their flight. China has in the past issued stapled visas to Indians from Arunachal Pradesh.
- Only in July, three wushu players from Arunachal Pradesh, due to take part in the World University Games in Chengdu, were issued stapled visas. In this instance, the decision to bar the athletes appears particularly vindictive as visas were not needed to travel for athletes issued digital accreditations.
- Indian officials believe China thus went out of its way to bar their travel by instructing the airline to not allow them to board. The Ministry of External Affairs in a statement described the action as "targeted and pre-meditated".
- This is, unfortunately, not the first instance of China using sporting events that should have no place for politics to score geopolitical points.

Past instances



- In February last year, China ill-advisedly selected the People's Liberation Army's commander involved in the Galwan Valley clash as one of the torchbearers for the Winter Olympics.
- Both then and now, the organisers have appeared more than happy to look the other way given China's status as both a willing host and strong financial backer of such events.
- Beyond the Asian Games, the latest Chinese action serves as a reminder of the current distrust in bilateral relations, as well as of the absence of adequate channels of communication to deal with long-persisting thorny issues, including visas.
- India has correctly made clear that restoring normalcy in relations will not be possible without completing the disengagement process along the Line of Actual Control and restoring peace in border areas.
- Until China reviews its stance on the border, the current state of affairs, which suits neither of the two neighbours, is likely to endure.

ECONOMICS

Asus, Dell, others apply for manufacturing laptops in India

Relevance: Prelims & Mains Paper III; Economics

Why in news?

- As part of its renewed production linked incentive (PLI) scheme for IT hardware, the Centre has received applications from 38 entities, including the likes of Asus, Dell, HP, and Foxconn, that want to manufacture laptops, personal computers and servers in India.
- Apple, however, has opted to skip participation in the scheme.
- The development comes weeks after the Centre imposed – and then postponed – a licensing requirement on the import of laptops and personal computers, which had set alarm bells ringing at major electronics hardware manufacturers. The move was deferred until October 31.

Details

- The Centre had more than doubled the IT Hardware PLI in May this year to Rs 17,000 crore since it was first cleared in 2021 with an outlay of Rs 7,350 crore.
- The first version of the scheme was a laggard with only two companies – Dell and Bhagwati – managing to meet first year (FY22) targets, and the industry calling for a renewed scheme with an increased budgetary outlay.
- The average incentive over six years will be about 5% of net incremental sales compared with the 2% over four years offered earlier.
- Companies that locally manufacture certain components including memory modules, solid state drives and display panels will also get additional incentives under the restructured scheme.

(more ahead)

Cont'd

- There will be flexibility in choosing the base year as well. The total benefits – given the sales projections by companies – could add up to PLI of Rs 22,880 crore.
- The IT hardware manufacturing drive also seeks to penalise companies if production lags behind the set thresholds, by deducting as much as 10% from the subsidies.
- This scheme will interplay with the semiconductor scheme of the govt, with chips made in India, potentially being used by laptop manufacturers. Sourcing local components has an added incentive under the scheme.

Significance of local production for India

- Even as the country has identified electronics manufacturing as a key sector for future economic growth, India has seen an increase in imports of electronic goods and laptops/computers in the last few years. During April-June this year, the import of electronic goods increased to \$6.96 billion from \$4.73 billion in the year-ago period, with a share of 4-7% in overall imports.
- The highest share of imports is in the category of personal computers including laptops, and palmtops, under which imports from China stood at \$558.36 million in April-May this year as against \$618.26 million in the year-ago period. China accounts for roughly 70-80% of the share of India's imports of personal computers, laptops.

Companies that have applied

- Apart from Asus, Dell, HP and Foxconn, other companies that have applied for the scheme include Lenovo, Acer, and Flex, which is said to be manufacturing Reliance's JioBook laptop. HP Enterprises (HPE) has also applied for manufacturing servers in India.
- While the expected incremental production at the end of six years of the scheme is estimated at Rs 3.35 lakh crore, it could bring an incremental investment of just Rs 4,000 crore over these many years. The govt estimates the manufacturing process to result in 75,000 direct jobs.

Role of import restrictions in increased PLI applications

- A day after the import restriction was imposed, as of August 4, only two companies had applied to participate in the IT hardware PLI which was renewed in May this year, with 44 companies having registered with an intent to apply. The number of applicants jumped by another 36 after 26 days, taking the total to 38. The deadline for application was August 30.
- The chaos following the notification of the import restriction led to companies like Apple and Samsung freezing their imports until more clarity was available. Some manufacturers also had their consignments held at customs due to the immediate nature of the directive.
- Industry associations representing companies like Apple, Dell and HP, had written to the US govt criticizing the Indian govt's decision, and seeking its intervention to initiate a conversation with the Indian govt and urge it to reconsider the policy.

Centre imposes a 20% export duty on par-boiled rice till October 15



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- In a move to check domestic rice prices and ensure domestic food security, the Indian govt has prohibited the export of white rice.
- It has also levied a 20% export duty on par-boiled rice till October 15, and permitted the export of Basmati rice for contracts with value of \$1,200 a tonne or above.
- The export of broken rice has been prohibited since last September. However, it is allowed on the basis of permission granted by the govt to other countries to meet their food security needs and based on the request of their govt.

Production Estimates

- As per estimates, during the Rabi season 2022-2023, rice production was 13.8% less, at 158.95 lakh tonnes against 184.71 lakh tonnes during Rabi 2021-2022.
- Kharif sowing data show that rice is sown on 384.05 lakh hectares this year as on August 25 compared with 367.83 lakh hectares during the same period last year.
- But, in States such as Tamil Nadu where the Samba crop sowing starts usually in August, a section of farmers says there will be delayed sowing due to a shortfall in the south west monsoon.
- Trade and rice millers say that new season crop arrivals will start after the first week of September and that El Nino effects are likely to impact arrivals to some extent.

Export figures

- India is the largest rice exporter globally with a 45% share in the world rice market. Overall rice exports in April-May of 2023 were 21.1% higher compared with the same period last financial year.
- In May alone, export of Basmati rice was 10.86% higher than its exports in May 2022. Non-Basmati rice shipments were 7.5% more, despite the govt introducing a 20% export duty on white rice and prohibiting the export of broken rice last September.
- The shipment of non-Basmati rice has been on the rise for the last three years and the export of Basmati rice in 2022-2023 was higher than the previous year.
- Till August 17 this year, total rice exports (except broken rice) were 15% more at 7.3 million tonnes as against the 6.3 million tonnes during the corresponding period last year.

Likely future scenario

- The govt has increased the Minimum Support Price (MSP) for rice, and the paddy procured now by rice millers are at a price higher than the MSP.
- The prices will not decline for farmers. The restrictions on exports will ensure that there is no steep climb in rice prices in the market.
- When the benchmark price set by the govt is high, the farmers will realise better prices, say trade sources. For domestic consumers, though there is a slight increase in rice prices at present, in the long run, availability is secured and prices are not expected to spiral.
- As per exporters, the prices of Indian par-boiled rice in the international market is competitive even with the levy of a 20% duty.
- Countries such as Indonesia, which are rice exporters, are looking at imports (raw rice) now.



OCCRP's latest report makes fresh allegations against Adani



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- After Hindenburg, the Organised Crime and Corruption Reporting Project (OCCRP) has made fresh allegations of stock manipulation against the Adani Group.
- OCCRP's recently published report claims that exclusive documents obtained by it show that "in at least two cases ... [supposedly public] investors turn out to have widely reported ties to the group's majority shareholders, the Adani family", and helped manipulate Adani companies' stock prices.

What is OCCRP?

- American Sullivan and Bulgarian Paul Radu, both investigative journalists, founded OCCRP in 2006, after they realised the similarities in their experiences of investigating and reporting on organised crime and systemic corruption.
- Initially funded by the United Nations Democracy Fund (UNDEF), the OCCRP network first opened an office in Sarajevo.
- Over the years, the OCCRP has grown from six journalists working in five countries to more than 150 journalists in 30 countries. The idea is to have a global network of journalists with easy communication and information-sharing so that global networks of corruption and crime can be better understood and exposed.
- The OCCRP also collaborates with regional partners, including Arab Reporters for Investigative Journalism (ARIJ), Centro Latino Americano de Investigacion Periodistica (CLIP), and Radio Free Europe/Radio Liberty (RFE/RL). It is a member of the Global Investigative Journalism Network as well.

Impact over the years

- As per its own records, since 2009 reporting by the OCCRP has directly led to 398 official investigations, 621 arrests and sentences, 131 resignations, and \$10 billion+ in fines levied and money seized.
- It has been involved in many high-profile probes over the years, including multiple investigations on Russia's oligarchs and Vladimir Putin. The OCCRP also worked on the Panama Papers project with the International Consortium of Investigative Journalists, producing more than 40 stories on corruption through the use of offshore entities, which won the 2017 Pulitzer Prize Journalism.
- The organisation has been nominated for this year's Nobel Peace Prize for its work "contributing to peace by unmasking political corruption and organized crime."



A Soros connection!



- Adani's statement against the OCCRP calls it "Soros-backed". Earlier this year, critical comments made by billionaire advocacy funder George Soros about Narendra Modi and Gautam Adani, post the Hindenburg report, had drawn a lot of flak from India's ruling party and its supporters.
- Since then, Soros's name has frequently been used to discredit criticism targetted at the govt, or in this case, Adani.
- As per OCCRP, Soros's Open Society Foundations is one of its 21 major institutional funders. Other supporters include The Rockefeller Brothers' Fund, the US Department of State, Ford Foundation, German Marshall Fund and The Swedish International Development Cooperation Agency.
- The OCCRP is thus supported both by state and non-state institutional actors, as well as smaller individual donors.

Data analysis shows Odisha leads while Punjab lags far behind in State-level finances



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- During a recent interview, **PM Narendra Modi underscored the need for fiscal discipline**, which essentially refers to governments spending within their means.
- This comment has placed **state govt finances in sharp focus yet again**. PM Modi and his political opponents have been arguing about the issue of populism and the politics of dole (revdi culture) — what constitutes it and who is responsible for worsening it.

Parameters to judge state govt finances

- Recently, **economists analyzed state finances** on the basis of latest Budget data. They analysed data for 27 states on four different counts:
 - **Fiscal Deficit** (the amount of money a state govt has to borrow to meet its annual expenditure) expressed as a percentage of overall size of the state's economy (the gross state domestic product or GSDP).
 - **Debt** (that is, the accumulated borrowings by the govt over the years) expressed as a percentage of GSDP.
 - **Outstanding guarantees** that a state govt provides; again expressed as a percentage of the GSDP.
 - **Percentage of the total revenue income** that a state govt has to spend towards paying off the interest component of its debt.

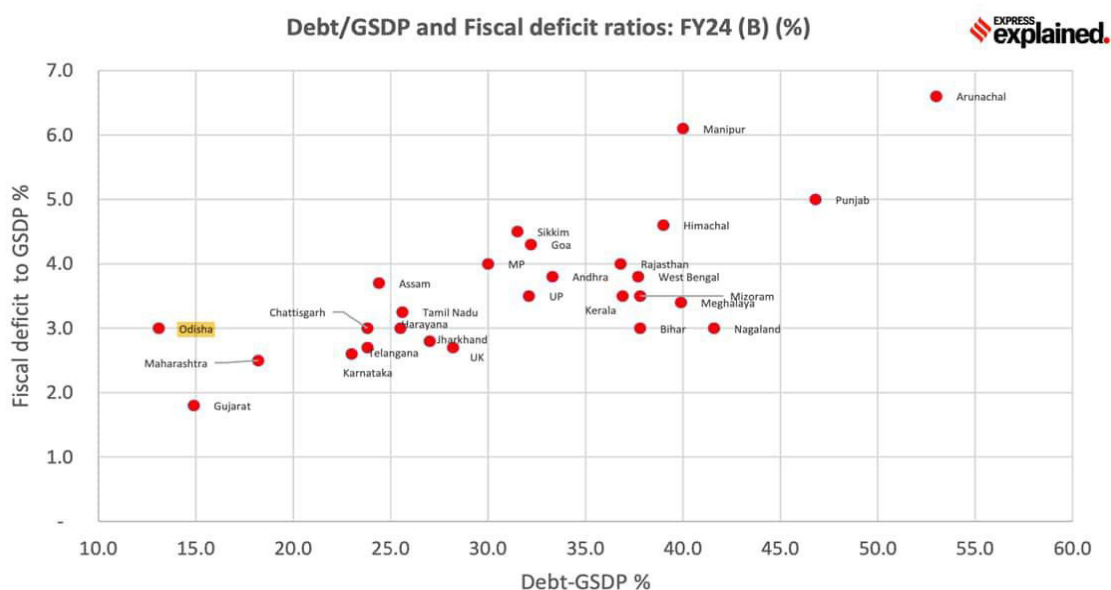
Details



- **Fiscal Deficit** tells us how much a state government has to borrow in the current financial year to meet the gap between its expenditures and revenues. Normally, fiscal deficit should not exceed more than 3% of a state's GDP.
- **Debt levels** tell a longer-term story. If a state has been recklessly borrowing year after year, it would end up having a huge pile of debt. Normally, debt should not go beyond 20% of a state's GDP.
- **Outstanding guarantees** refer to debts that are on the books of state government-run entities but are effectively backed by the state govt. For instance, a state govt-run electricity distribution company or an irrigation utility. Often such entities subsidise consumers by not charging the full price. In the process, they run up a debt which, in the final analysis, has to be paid by the state govt. State govts that do not allow their entities to run up high debts (by charging market prices) end up having lower outstanding guarantees.
- The fourth metric captures the net result of running high deficits and debts: That one has to pay higher interest costs. This is akin to a common man having to pay a higher EMI for a bigger loan. However, this interest payout is expressed as a percentage of the state government's total revenues. Again, just as a person with a big income can afford a big interest payment, so can a state pay higher interest payments despite high debt if it knows how to earn enough revenues.

States' ranking

- Chart 1 (on next slide) maps the first two metrics. The fiscal deficit (as a percentage of GSDP) is plotted on the vertical axis and the total debt (as a percentage of GSDP) is mapped on the horizontal axis. That's because to arrive at the best and worst performers, one has to see the combined performance on both the counts.
- On debt levels, only three states — Odisha, Gujarat and Maharashtra — in India manage to meet the prudential norm. However, within the three, it is Odisha which has the lowest debt levels; this shows it has contained its annual fiscal deficit far better than the other two states over the recent past.
- Barring these three, the situation just gets progressively worse. There are four states — Karnataka, Telangana, Assam and Chhattisgarh — which are at a debt level of less than 25%.
- The next five — Tamil Nadu, Haryana, Jharkhand, Uttarakhand and Madhya Pradesh — have debt ratios between 25%-30%.
- But as many as 15 states (out of the 27 for which data was available), had debt levels in excess of 30% of the state GDP (or GSDP). Four states, in particular, raise a red flag: Manipur, Nagaland, Punjab and Arunachal Pradesh.
- On the fiscal deficit front, three states — Punjab, Manipur and Arunachal — have fiscal deficit of 5% and above.
- Taking into account the performance on both metrics together, Odisha comes out on top while Punjab lies at the bottom.



Source: PRS Legislative Research

Chart 1

- Odisha continues to do well in the third metric as well as shown by the following chart.

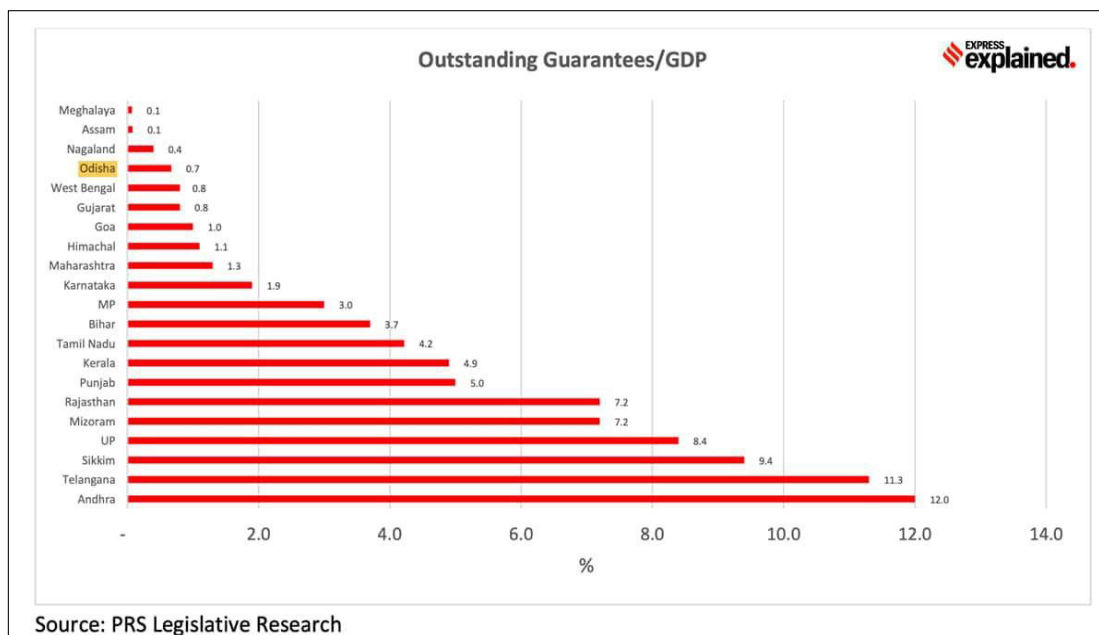
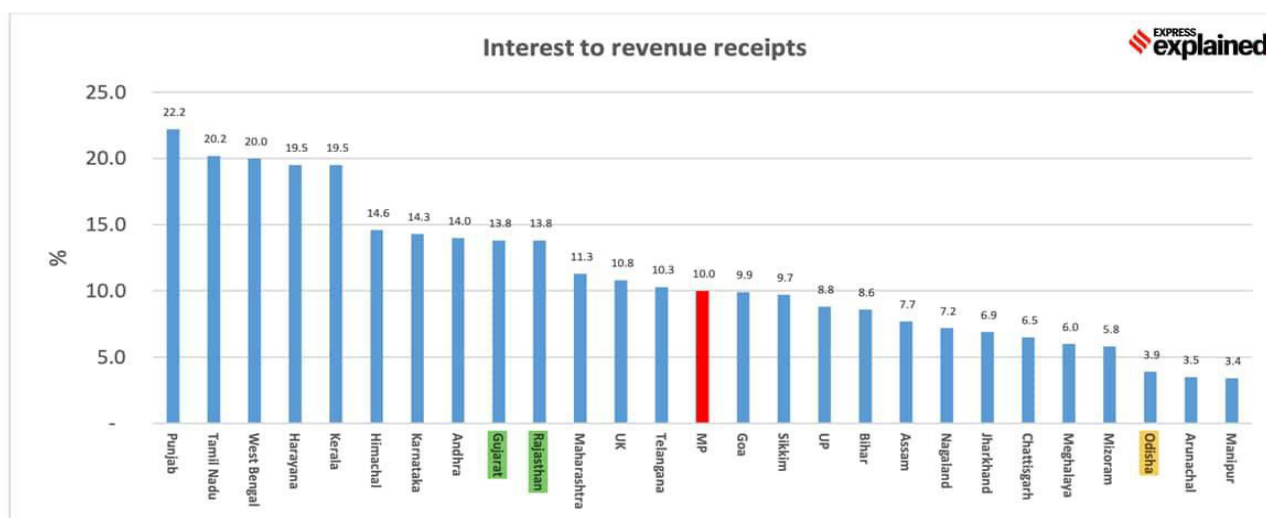


Chart 2

- Lastly, the chart below maps the impact high debt. As debt increases so does the interest outgo, which in turn puts pressure on the revenue account as a larger part of the revenue receipts are used to pay interest which means that less is left for other purposes. Here, again, Odisha stands out among the bigger states of India.



The best and worst placed states

- In the final analysis, Odisha seems to lead the rest of India. Its debt to GDP ratio is the lowest and there are low contingent liabilities. The fiscal deficit too has been within the FRBM norms and the debt servicing ratio very low.
- Punjab, on the other hand, is the one big state that is pressurised on all counts — debt ratio, fiscal deficit, guarantees and debt servicing.
- These results are similar to the findings of a report released by CARE Ratings at the start of 2023. It, too, pegged Odisha as the best and Punjab as the worst among the major states on fiscal parameters.

How does Odisha do it?

- Economists outline three main reasons for Odisha's continued success:
 - Sticking to annual fiscal deficit targets - Doing this ensures that Odisha doesn't face higher interest rates and that keeps borrowing costs at a minimum.
 - Not compromising on expenditure - This means sticking to what is planned and not resorting to ad hoc changes mid-year.
 - Having realistic budget estimates for both income and expenditure - Often when a state govt is struggling to meet the fiscal deficit target, it can resort to overstating its revenues and understating its likely spending. Presenting a realistic picture helps Odisha govt live within its means.

SEBI plans to launch one-hour trade settlement by March next year

Relevance: Prelims & Mains Paper III; Economics

Why in news?

- Securities and Exchange Board of India (SEBI), which had in July announced it was working to launch real-time settlement of trades, is now planning to implement one-hour settlement of trades first.
- The regulator is aiming to launch one-hour settlement of trades by March next year. The Application Supported by Blocked Amount (ASBA)-like facility for trading in the secondary market will likely be launched in Jan. 2024.

What is trade settlement?

- Settlement is a two-way process which involves the transfer of funds and securities on the settlement date. A trade settlement is said to be complete once purchased securities of a listed company are delivered to the buyer and the seller gets the money.
- The current cycle of T+1 means trade-related settlements happen within a day, or 24 hours of the actual transactions. The migration to the T+1 cycle came into effect in January this year.
- India became the second country in the world to start the T+1 settlement cycle in top-listed securities after China, bringing in operational efficiency, faster fund remittances, share delivery, and ease for stock market participants.

Benefits of one-hour trade settlement

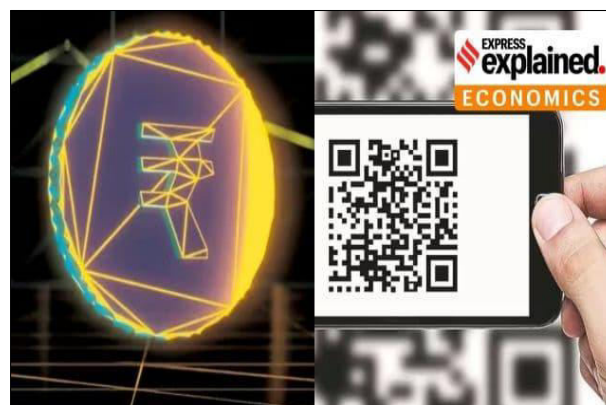
- Under the current T+1 settlement cycle, if an investor sells securities, the money gets credited into the person's account the next day.
- In one-hour settlement, if an investor sells a share, the money will be credited to their account in an hour, and the buyer will get the shares in their demat account within an hour.

Beginning of UPI QR Code-Central Bank Digital Currency interoperability

Relevance: Prelims & Mains Paper III; Economics

Why in news?

- With banks enabling the interoperability of Unified Payments Interface's (UPI) Quick Response (QR) code with their central bank digital currency (CBDC) or e₹ application, users of retail digital rupee will be able to make transactions by scanning any UPI QR at a merchant outlet.
- Merchants can also accept digital rupee payments through their existing UPI QR codes.
- This integration of UPI and CBDC is part of the Reserve Bank of India's (RBI) ongoing pilot project on pushing the retail digital rupee (e₹-R).



What is interoperability?

- Interoperability is the technical compatibility that enables a payment system to be used in conjunction with other payment systems, according to the RBI.
- Interoperability allows system providers and participants in different systems to undertake, clear and settle payment transactions across systems without participating in multiple systems.
- Interoperability between payment systems contributes to achieving adoption, co-existence, innovation, and efficiency for end users.

What is UPI QR code-CBDC interoperability?

- Interoperability of UPI with the digital rupee means all UPI QR codes are compatible with CBDC apps. Initially, when the pilot for the retail digital rupee was launched, the e₹-R users had to scan a specific QR code to undertake transactions.
- However, with the interoperability of the two, payments can be made using a single QR code. The digital rupee issued by the RBI, or the CBDC, is a tokenised digital version of the rupee.
- The e₹ is held in a digital wallet, which is linked to a customer's existing savings bank account. UPI is directly linked to a customer's account.

Benefits

- The interoperability of UPI and CBDC will ensure seamless transactions between a customer and merchant without having the need to switch between multiple digital platforms.
- It will allow a digital rupee user to make payments for their daily needs, such as groceries and medicines, by scanning any UPI QR codes at any merchant outlet.
- Even merchants are not required to keep a separate QR code to accept the digital rupee payments. They can accept CBDC payments on their existing QR code.

What is a QR code?

- A Quick Response (QR) code consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera.
- It contains information about the item to which it is attached. QR code is an alternate contactless channel of payments. It allows merchants or businesses to accept payments from their customers directly into their bank accounts.

Interoperability's role in increasing CBDC adoption

- Currently, UPI is a widely used payment method, and the interoperability between it and the CBDC will propel the adoption of the digital rupee.
- At present, more than 70 mobile apps and over 50 million merchants accept UPI payments. In July, there were 1.3 million customers and 0.3 million merchants using the retail digital rupee. The daily per-day e₹-R transactions in July were around 5,000-10,000.
- As per SBI, the seamless integration of CBDC with UPI will enhance the acceptance and utilization of digital currencies in everyday transactions.
- Notably, banks including State Bank of India, Bank of Baroda, Kotak Mahindra Bank, Yes Bank, Axis Bank, HDFC Bank and IDFC First Bank, have introduced UPI interoperability on their digital rupee application.

RBI's new guidelines to let borrowers switch loans

Relevance: Prelims & Mains Paper III; Economics


Why in news?


- Reserve Bank of India (RBI) recently issued guidelines enabling a borrower to transition from a floating interest rate-based loan to one with a fixed interest rate.
- According to RBI, the endeavour was to address borrowers' grievances pertaining to the elongation of loan tenure and/or an increase in the EMI amount in the event of an increase in the benchmark interest rate.
- A lack of proper communication along with the absence of consent formed part of the concerns. The provisions would be extended to existing as well as new loans by the end of the current calendar year.

Details

- RBI has given borrowers the option to switch over to a fixed (interest) rate mechanism for their loans from floating rates. This would be based on a board-approved policy drafted by the lending entity. The policy must also specify the number of times such a switch would be allowed during the tenure.
- The lender must also transparently communicate to the borrower all relevant charges alongside service charges or administrative costs associated with the transition.
- The responsibility would rest with the lender to communicate clearly, at the time of loan sanction, the impact emanating from the change in regime (floating to fixed), such as the change in EMI and/or tenure of the loan or both.

(more ahead)

Cont'd	Difference between a fixed and floating interest rate	
<ul style="list-style-type: none"> - The borrower would now also have the option to choose between enhancement of the EMI or elongation of the tenure or a combination of both. S/he might also opt to prepay the loan, either in part or full, at any point during the tenure. This would, however, still invite foreclosure charges or pre-payment penalty. - Further, the regulator has sought that lending entities provide borrowers, through appropriate channels, a statement at the end of each quarter enumerating the principal and interest recovered till date, EMI amount, number of EMIs left and annualised rate of interest/ Annual Percentage Rate (APR) — for the entire tenure of the loan. - The instructions would apply to all equated instalment-based loans of different periodicities albeit with certain changes based on the nature of the loan. 	<ul style="list-style-type: none"> - Fixed interest rates are those that do not change during the tenure of the loan. On the other hand, floating interest rates are subject to market dynamics and the base rate — therefore, the risk differentiation. - Floating interest rates are generally lower than fixed interest rates. For e.g, if the floating interest rate for home loans is 10.5%, the fixed interest rate would be 12%. - Lenders argue that even if the floating interest rate were to rise by up to 2.5 percentage points, the borrower would be able to save more money when it is below the fixed rate. - It has been widely argued that their preference for the floating rate-based regime is to better adjust their positions as per the evolving market dynamics. - The advantages are transmitted onto the borrower's savings pool, but the opposite also holds true in a rising benchmark rate regime. Also noteworthy is the fact that floating interest rate loans do not draw any prepayment penalty— unlike fixed rate loans. - However, the fixed rate-based regime endows a borrower with greater certainty and security. This also helps in better planning and structuring of individual budgets. 	

RBI to discontinue the incremental cash reserve ratio (I-CRR)		
Relevance: Prelims & Mains Paper III; Economics		
Why in news?	When was I-CRR introduced?	
<ul style="list-style-type: none"> - The RBI has announced that it would discontinue the incremental cash reserve ratio (I-CRR) in a phased manner. The central bank will release the amount which banks have maintained under I-CRR in stages. - This will mean that banks will have sufficient funds to meet higher credit demand during the upcoming festival season. 	<ul style="list-style-type: none"> - On August 10, after announcing the monetary policy, RBI said that banks will have to maintain an I-CRR of 10% on the increase in their net demand and time liabilities (NDTL) between May 19, 2023, and July 28, 2023. It came into effect from the fortnight starting August 12. RBI left the CRR unchanged at 4.5%. - The RBI introduced I-CRR as a temporary measure to absorb excess liquidity from the banking system. The level of surplus liquidity in the system surged because of the return of Rs 2,000 banknotes to the banking system, RBI's surplus transfer to the govt, pick up in govt spending and capital inflows. The daily absorption of liquidity by the RBI in July was Rs 1.8 lakh crore. 	

Impact of I-CRR on liquidity conditions

- As per RBI, the I-CRR measure will absorb above Rs 1 lakh crore of excess liquidity from the banking system.
- The banking system's liquidity turned deficit for the first time in the current fiscal on August 21 after the RBI's I-CRR mandate. The tight liquidity condition was also contributed by outflows on account of goods and services tax (GST) and the selling of dollars by the RBI to stem the rupee's fall. The liquidity, as reflected by the amount of money injected by the RBI into the system, stood at Rs 23,644.43 crore on August 21.
- However, the banking system liquidity again turned to surplus from August 24. On Sept. 8, the RBI absorbed Rs. 76,047 crore of surplus liquidity from the system.

What is CRR?

- The Cash Reserve Ratio (CRR) is the minimum amount of the total deposits which banks have to maintain as cash reserve with the Reserve Bank of India.
- It is an essential tool to maintain the health of the banking system. Banks cannot use this amount for lending or for any investment purposes. Currently, CRR stands at 4.5%.

Banks must return borrowers' documents within 30 days of loan repayment, says RBI


Relevance: Prelims & Mains Paper III; Economics


Why in news?

- The RBI has asked all Regulated Entities to release the original documents of movable or immovable property within a month of the full repayment or settlement of loans by borrowers.
- These directives will come into effect on December 1, 2023.

Details

- The RBI has directed all Regulated Entities (REs) — that is banks, non-banking finance companies (NBFCs), housing finance companies, small finance banks (SFBs), regional rural banks (RRBs) and cooperative banks — to release, as part of responsible lending conduct, the original movable or immovable property documents, and remove charges registered with any registry within a period of 30 days after full repayment or settlement of the loan account by a borrower.
- A borrower will have the option of collecting the original property documents either from the banking outlet or the branch where the loan account was serviced, or any other office of the RE where the documents are available, as per their preference.
- The lender will have to mention the timeline and place of return of original property documents in the loan sanction letters issued on or after Dec. 1, 2023.
- To address a situation in which the borrower(s) are no longer alive, the lenders must have a well laid out procedure for the return of the original property documents to the legal heirs.
- The Regulated Entities will have to display the procedure on their website, along with other policies and procedures for the information of customers.

Need for these directives	Loans that will be impacted	
<ul style="list-style-type: none"> - The RBI said it had been observed that the REs follow divergent practices in the release of property documents, which leads to customer grievances and disputes. - The directions have been issued to address these issues and to promote responsible lending conduct. 	<ul style="list-style-type: none"> - This is for personal loans, which, as per the RBI's definition, are loans that are given to individuals, and which consist of consumer credit, education loan, loans given for creation or enhancement of immovable assets (such as housing), and loans given for investment in financial assets like shares and debentures. The new directives will be applicable to all these categories of loans. 	

Lender's delay in releasing the property documents!	Loss or damage of the original property documents!	
<ul style="list-style-type: none"> - The RBI has said that in case of a delay in releasing the original movable or immovable property documents, or a failure to file the charge satisfaction form with the relevant registry beyond 30 days after the full settlement of the loan, the RE will have to communicate to the borrower the reasons for the delay. - In case where the delay is attributable to the Regulated Entity, it will have to compensate the borrower at the rate of Rs 5,000 for each day of delay. 	<ul style="list-style-type: none"> - In the event of loss or damage to original property documents, either in part or in full, the lender will assist the borrower in obtaining duplicate or certified copies of the property documents and will also bear the associated costs, in addition to paying compensation of Rs 5,000 per day for each day of delay beyond the stipulated 30-day timeframe, the RBI has said. - However, in such cases, an additional time of 30 days will be available to the REs to complete this procedure and the delayed period penalty will be calculated thereafter, that is, after a total period of 60 days. 	

What is Gresham's law and how it affects currencies?



Relevance: Prelims & Mains Paper III; Economics

Details

- Gresham's law refers to the statement that "bad money drives out good." This law comes into play when the exchange rate between two moneys or currencies is fixed by the government at a certain ratio that is different from the market exchange rate.
- Such price fixing causes the undervalued currency — that is, the currency whose price is fixed at a level below the market rate — to go out of circulation. The overvalued currency, on the other hand, remains in circulation but it does not find enough buyers.
- It should be noted that the market exchange rate is essentially an equilibrium price at which the supply of a currency is equal to the demand for the currency.
- Also, the supply of a currency in the market rises as its price rises and falls as its price falls; while, on the other hand, the demand for a currency falls as its price rises and rises as its price falls.
- So, when the price of a currency is fixed by the govt at a level below the market exchange rate, the currency's supply drops while demand for the currency rises.
- Thus, a price cap can lead to a currency shortage with demand for the currency outpacing supply..

Origins of the term



- Gresham's law is named after English financier Thomas Gresham who advised the English monarchy on financial matters.
- It applies not just to paper currencies but also to commodity currencies and other goods.
- In fact, whenever the price of any commodity — whether it is used as money or not — is fixed arbitrarily such that it becomes undervalued when compared to the market exchange rate, this causes the commodity to disappear from the formal market.
- The only way to get hold of an undervalued commodity in such cases would be through the black market. Sometimes, countries can even witness the outflow of certain goods through their borders when they are forcibly undervalued by govts.
- Gresham's law can be seen at play whenever a govt fixes the exchange rate (or price) of a commodity money (such as gold and silver coins) far below than the market price of the commodity backing them. In such cases, people who hold the commodity money would stop offering the money at the price fixed by the govt.
- They may even melt such commodity money to derive pure gold and silver that they can sell at the market price, which is higher than the rate fixed by the govt.

A real-world example...

- Gresham's law came into play most recently during the economic crisis in Sri Lanka last year, during which the Sri Lankan central bank fixed the exchange rate between the Sri Lankan rupee and the U.S. dollar.
- The Central Bank of Sri Lanka, at a certain point, mandated that the price of the U.S. dollar in terms of the Sri Lankan rupee should not rise beyond 200 rupees per dollar even though rates in the black market suggested that the U.S. dollar should sell for far more than 200 rupees.
- In effect, people were banned from paying more than 200 Sri Lankan rupees for a dollar, thus causing the rupee to be overvalued and the U.S. dollar to be undervalued when compared to the market exchange rate.
- This caused the supply of dollars in the market to fall and the U.S. dollar to be gradually driven out of the formal foreign exchange market. People who wanted U.S. dollars to purchase foreign goods then had to purchase dollars from the black market by paying far more than 200 Sri Lankan rupees for each U.S. dollar.

Necessary conditions

- Gresham's law holds true only when the exchange rate between currencies is fixed under law by the govt and the law is implemented effectively by authorities. In the absence of any govt decree fixing the exchange rate between currencies, it is good money that eventually drives bad money out of the market and not the other way round.
- When the exchange rate between currencies is not fixed and people have the choice to freely choose between currencies, people gradually stop using currencies that they consider to be of poor quality and adopt currencies that are found to be of better quality.
- This phenomenon wherein "good money drives out bad" is called Thiers' law (named after French politician Adolphe Thiers) and it is seen as a complement to Gresham's law.
- The rise of private cryptocurrencies in recent years has been cited by many analysts as an example of good money issued by private money producers driving out bad money issued by govts.

IRDAI envisions Bima Sugam as the 'UPI moment' for the insurance sector



Relevance: Prelims & Mains Paper III; Economics

Why in news?

- The Insurance Regulatory and Development Authority of India (IRDAI) claims that the proposed Bima Sugam is a "game changer" and a "UPI moment" for the insurance segment, with ambitions of becoming the largest online market for insurance products and services which has not been practiced anywhere in the world.

Details

- Bima Sugam is an online platform where customers can choose a suitable scheme from multiple options given by various companies.
- All insurance requirements, including those for life, health, and general insurance (including motor and travel) will be met by Bima Sugam.
- This platform will help in the settlement of claims, whether it's health coverage or death claims, in a paperless manner on the basis of policy numbers.
- Details about insurance schemes are expected to be stored in the platform through the insurance repository initially. This will be followed by a listing of policies. The overall budget for Bima Sugam is Rs 200 crore.
- IRDAI has appointed a committee for the creation of the platform and now plans to invite proposals to appoint a service provider. The latter will be the technological partners for creating and running a platform to provide all the services in one place.

Role and utility for customers

- The proposed platform would act as a single window for the policyholder to manage his/her insurance coverage. It will provide end-to-end solutions for customers' insurance needs i.e., purchase, service, and settlement in a seamless manner.
- It will facilitate insurance companies to access the validated and authentic data from various touch points on a real-time basis. The platform will interface for the intermediaries and agents to sell policies and provide services to policyholders, among others, and reduce paperwork.
- Commissions on policies are expected to come down, benefiting the customers. As per insurers, the cost of buying policies will come down.
- Bima Sugam will enable customers to identify a suitable scheme for themselves from the hundreds of insurance schemes in the life and non-life sectors.

Less paperwork

- Customers will open an insurance account and the policies will be stored in this account, thus removing the need for physical documents.
- Further, the paperwork involved in buying a policy will also come down. Settlement of claims and renewal of policies will also become faster.
- In short, identifying the right policy, buying it, settling the claims and renewals will be streamlined in online process. The process will be mostly on the lines of demat accounts and online trading in the case of stock markets.



Implementation and potential impact

- IRDAI plans to implement Bima Sugam from June 2024. Life insurance and general insurance companies will own a 47.5% stake each, while brokers and agent bodies will own 2.5% each.
- While industry observers say it's going to be a challenging job to implement the Bima Sugam as it has to be backed by technology and innovation, they say it will increase insurance penetration in the country.
- Notably, though 80% of the consumers acknowledge insurance's pivotal role in financial security, yet a staggering 94% remain inadequately covered.

ENVIRONMENT & BIODIVERSITY

Climate crisis gets worse, three climate records got broken this year



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- Raging wildfires across Europe and Canada. Devastating floods, cloudbursts, and storms in China, India and Brazil. Sweltering heat waves in numerous countries...these recent extreme weather events leave little to no doubt that the climate crisis is here.
- As a result, numerous climate records on temperature, ocean heat, and Antarctic sea ice cover are getting smashed week after week.



Hottest summer ever

- This year's summer was the hottest on record, as per the C3S and the World Meteorological Organization (WMO). The three-month period from June to August broke previous records with an average temperature of 16.77 degree Celsius, which was 0.66 degree Celsius above the 1990-2020 average. (See chart on the next slide)
- Last month was the warmest August on record and the second hottest ever month after July 2023. It also showed that the average temperature in August was 16.82 degree Celsius — 0.71 degree Celsius more than the 1991-2020 average.
- In July, the global average daily temperature crossed the mark of 17 degree Celsius for the first time. While on July 3, the average temperature reached 17.01 degree Celsius, on July 6, mercury soared to 17.08 degree Celsius. The latter is currently the hottest day recorded on the planet.

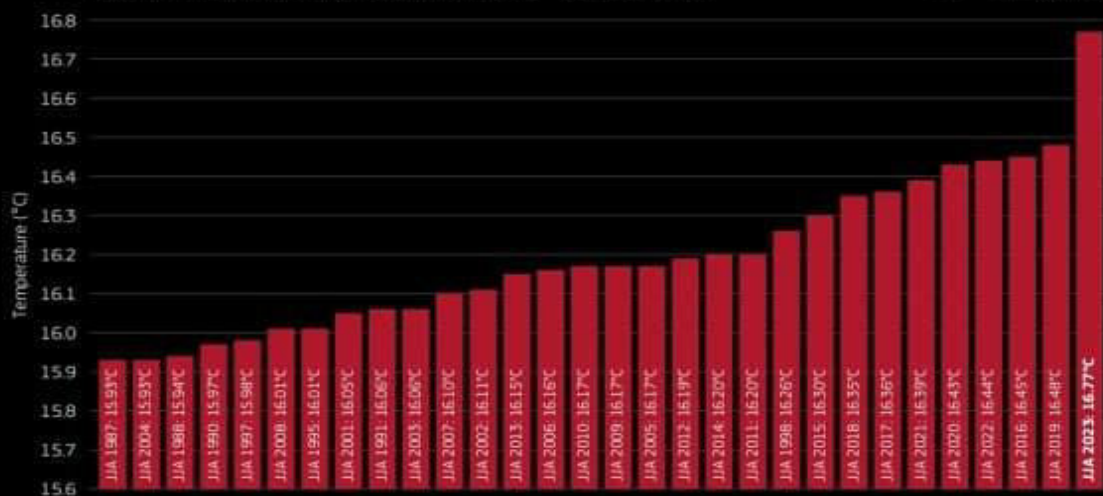
Why it matters?

- With such soaring temperatures and El Nino conditions setting in, the year 2023 may become the warmest ever in history. It is so far the second-hottest on record — only 0.01 degree Celsius below the all-time high of 2016.
- The development highlights the possibility that the planet may soon become 1.5 degree Celsius warmer than it was during the pre-industrial times. Once the limit is breached, there could be irrevocable damage to the Earth's ecosystem, severely impacting humans and other living beings.



THE 30 WARMEST BOREAL SUMMERS (JJA) GLOBALLY

Data: Global-mean surface air temperatures from ERA5 • Credit: C3S/ECMWF



PROGRAMME OF
THE EUROPEAN UNION

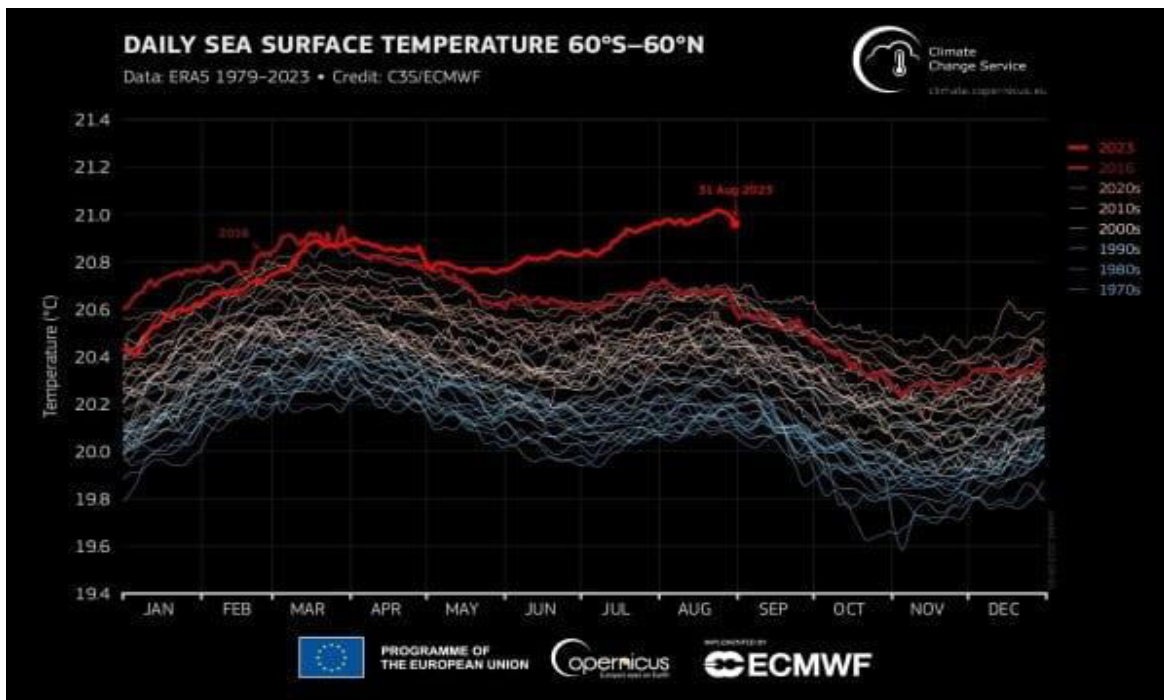


Highest sea surface temperature

- Global average sea surface temperature is also off the charts. Each day from July 31 to August 31, 2023, has witnessed warmer global average sea surface temperature than the previous record from March 2016. Therefore, August as a whole saw the highest global monthly average sea surface temperature on record across all months, at 20.98 degree Celsius — it is well above average for August — with an anomaly of 0.55 degree Celsius. (See chart on the next slide)
- Notably, the North Atlantic Ocean's average sea surface temperature reached a new high on August 31, when it touched 25.19 degree Celsius.

Why it matters?

- The oceans have absorbed 90% of the additional heat caused by human activity since the second half of the 19th Century. Higher ocean temperatures often cause marine heat waves (MHWs), which are extreme weather events.
- MHWs lead to the deaths of several marine species, alter their migration patterns, cause coral bleaching and even impact weather patterns. They also can make storms like Hurricanes and Typhoons stronger.

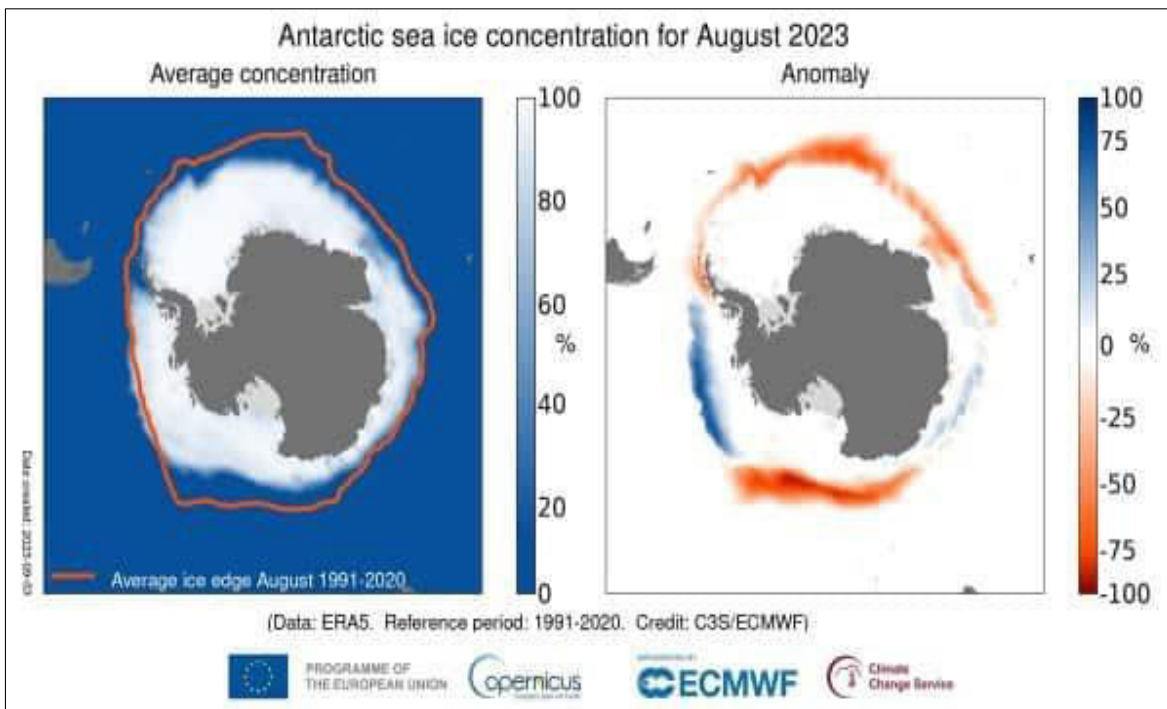


Lowest Antarctic sea ice extent

- The Antarctic sea ice extent hit a new record low in 2023. In July, the sea ice extent averaged 13.5 million sq km, the lowest levels observed for this time of year since the continuous satellite record began in late 1978. (See chart on the next slide)
- August was no better as the monthly value for sea ice cover was 12% below average — by far the largest negative anomaly for August on record. The worst affected regions were the northern Ross Sea and in the South Atlantic and Indian Ocean sectors.

Why it matters?

- The extreme decline in Antarctica's sea ice sheet has set alarm bells ringing for scientists. Less ice cover may have grave consequences for the world. Low sea ice extent leads to higher ocean temperatures, difficulty in the formation of ice, rising sea levels, and disruption of the ocean circulation.



Iran records life threatening heat index of 70 degrees Celsius

Relevance: Prelims & Mains Paper III; Environment

Why in news?

- In August, Iran recorded a scorching heat index of 70 degrees Celsius (°C) in the coastal part of the country, a metric at which survival of life is unfathomable, if not impossible.
- The country had also declared public holidays on two consecutive days on account of "unprecedented heat". This is not the first time this year that Iran is dealing with extreme heat.
- In July, the Persian Gulf Airport recorded a heat index of 66.7 °C.



What is heat index?

- Heat index, also known as apparent temperature, is a measure of how the temperature feels to humans. Relative humidity is an important factor that determines heat index, along with air temperature.

How is it calculated?



- There is a complex formula to calculate heat index. It considers a "typical adult human of either sex, with a height of 1.7 metres and a weight of 67 kg."
- Dew point, which is the temperature at which gas is transformed into a liquid state, is an important factor in the calculation of heat index.
- In terms of atmospheric moisture, it's the temperature at which air cannot hold any more water vapour, and droplets of water begin to form. The inventor of the heat index used 14 °C as the dew point in his calculations.
- Some countries have developed their own corresponding indices to measure heat index instead of using the original one.

Importance of measuring the heat index

- Hot air can hold more moisture than cold air. Therefore, when temperature rises, the air's capacity to hold moisture also increases, thus affecting the apparent temperature or heat index.
- Humidity is typically higher during heat waves — which is why the heat index at the time is usually higher than just the temperature because humid air can feel hotter to humans.

Impact of high humidity on the human body



- High humidity can lead to heat stress, meaning the body is unable to get rid of excess heat. Humans usually maintain a core temperature in the range of 36.1 to 37.2 °C.
- When the body is unable to get rid of excess heat, the heart rate increases due to a rise in core temperature, leading to heat-related exhaustion and rashes, among other symptoms. It can also be fatal if not addressed promptly.
- At high temperatures, the human body can lose excess heat through perspiration and cool itself. But when humidity is high as well, it is difficult to sweat and then for that sweat to evaporate because the air around is already saturated with moisture. This makes it difficult for the body to lose heat.
- On the other hand, if the humidity is low, evaporation of sweat is easier, thus making the apparent temperature feel close to the actual air temperature.
- This is why a measure of heat index is more useful than just the temperature to gauge the impact of heat on humans.

Adaptive measures

- A heat index value of 67°C or above can be extremely dangerous for people and animals who have direct and prolonged exposure.
- As per an expert, "With climate change, it is likely that we will continue to witness record-breaking heat index values across the world. We will need to prepare and adapt to such extreme conditions by investing in early warning, making changes to work timings, and finding sustainable cooling solutions."

Japan starts releasing wastewater from the Fukushima nuclear plant

Relevance: Prelims & Mains Paper III; Environment

Why in news?

- Last month, amid strong backlash from the public and neighbouring countries, Japan began the release of contaminated water from the Fukushima nuclear plant into the sea.



Background

- In 2021, Japan's govt announced plans to release over one million tonnes of contaminated water from the Fukushima nuclear plant into the sea over the next 30 years.
- The wastewater is a byproduct of the catastrophic 2011 earthquake and tsunami, which disabled the Fukushima Daiichi nuclear power plant, leading to the release of radioactive materials.
- After more than a decade of storing this wastewater, Japan says they are running out of storage space, and claims that the, now treated water is safe for release.
- However, since the announcement in 2021, a sizeable fraction of the public, both domestic and foreign, have been speaking out against this decision, claiming that mixing radioactive materials in the sea poses major health risks, especially since these countries rely heavily on seafood.

How is the water being treated?

- The water is being treated by the Tokyo Electric Power Company (TEPCO), Japan's largest electric utility firm.
- The water has been treated with multiple techniques, notably the Advanced Liquid Processing System (ALPS), which removes 62 types of radioactive materials.
- However, it doesn't remove tritium. TEPCO and the Japanese govt argue that the concentration of tritium does not exceed international standards, in particular, those of the International Atomic Energy Agency (IAEA), the United Nations' nuclear watchdog. The concentration is also six times less than the limit for tritium in drinking water, set by the World Health Organization.
- As per an expert, one can't remove tritium because it is identical to hydrogen. So removing it, chemically extracting it from wastewater becomes quite impossible. What all nuclear plants do is - mix it with water so that the tritium quantity reduces further, before it is actually released into the sea.

Public response



- Fears persist within the majority. A recent poll conducted in Japan shows that 16.3% of respondents are opposed to the discharge of the treated water, and 30.8% were neither opposed nor in favour.
- Several protests have been held in Seoul against the release, and many hoarded seafood ahead of the discharge. Some surveys show that 80-85% of South Koreans oppose the water's release.
- The Chinese govt, which has been against Japan's decision since the announcement was made, has already banned seafood from Japan.

Is the water safe?

- As per an expert, although, scientifically, the levels of radiation in the wastewater are not so high as to cause panic, there is evidence showing that exposure to radiation, even at low levels, can harm the health of humans and the environment.
- He adds that tritium is easily absorbed by the bodies of living creatures when it is in the form of tritiated water, and rapidly distributed throughout bodies via blood. Since tritiated water can pass through the placenta, it could lead to developmental effects in babies when ingested by pregnant women.

Affecting regional politics!



- Japanese Prime Minister Fumio Kishida and South Korean President Yoon Suk Yeol publicly ate seafood after the discharge began in order to strengthen public trust in the water treatment process.
- A key factor for Japan in maintaining relations with South Korea in particular, has been transparency over the treatment and release process.
- South Korea's govt, following repeated consolation by the IAEA, has told people that the water and the seafood is safe. They have also assured the public that they will continuously monitor the seawater and seafood, and that the 2011 ban on seafood from the water near Fukushima, would remain intact.
- For both PMs, the water may pose more geopolitical problems than health issues. Japan colonised the Korean peninsula in the early 20th century, and the tensions of that time continue to strain relations even now. But both leaders have been working toward forming friendlier relations, especially given the potential threats that their more aggressive neighbours, China and North Korea, present.

Significance of China's hardline response

- As per analysts, China's response must be seen through a wider geopolitical lens. Japan-Sino relations have fluctuated repeatedly in the recent past, especially as China grows its military presence in the South China Sea. This has evoked more nationalist sentiments from both sides, making this wastewater issue notable, but not necessarily new.
- China is also watching South Korea and Japan's strengthening relationship. China is not comfortable about the growing bonhomie between South Korea and Japan. The Chinese govt aims to make it an issue just to create further strategic fissures between South Korea and Japan

Humans breach most of the planetary boundaries

Relevance: Prelims & Mains Paper III; Environment

Why in news?

- Earth's blood pressure has shot up because of human activities. If they aren't curtailed soon enough, the planet could get severely ill.
- Six out of nine planetary boundaries, which can be imagined as blood pressure, that make Earth healthy and habitable have been transgressed because of human-induced pollution and destruction of the natural world, according to a new study. It has been carried out by a team of 29 scientists from eight different countries.
- The broken boundaries show Earth's life-support systems have been driven far away from the safe operating space for humanity that existed during the Holocene period. The period started with the end of the last ice age and the start of the Industrial Revolution. It's characterised by relatively stable and warm planetary conditions.



What are the planetary boundaries?

- Planet boundaries are a framework that identifies guardrails for humanity's impacts on the Earth system. Put simply, it sets limits on how much humans can be allowed to impact not only the climate but also other global processes that are essential for maintaining conditions on the planet to support modern civilisations.
- Developed in 2009, the framework includes nine planet boundaries that scientists believe capture all of the processes critical for maintaining the Earth's system state. These boundaries and their control variables are:
 - Biosphere integrity: The health of ecosystems and rate of extinction of species.
 - Climate change: Atmospheric CO₂ concentration and the change in radiative forcing — a measure of the balance of energy from sunlight that hits Earth, in comparison with thermal energy the planet loses.
 - Novel entities: Levels of plastic, concrete, synthetic chemicals, gene-modified organisms, etc. that would not be found on Earth if we humans were not here.
 - Stratospheric ozone depletion
 - Freshwater change: It includes an examination of the human-induced impact on blue water (found in lakes, rivers, and reservoirs) and green water (available in the soil for plants and soil microorganisms)
 - Atmospheric aerosol loading: Tracking various particles from anthropogenic emissions that affect cloud formation as well as global and regional atmospheric circulation.
 - Ocean acidification: Reduction in the pH of the ocean over an extended period of time.
 - Land system change: Changes in land use, especially the conversion of tropical forests to farmland.
 - Biogeochemical flow: Alteration in the natural flows and the forms of nitrogen and phosphorus cycles, which are essential elements for plant growth.

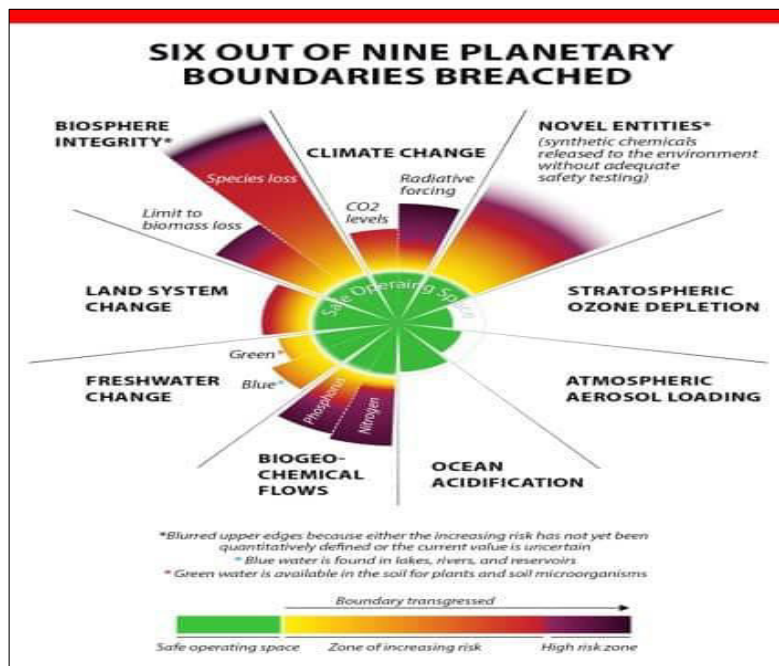
Findings of the study

- Out of the nine planetary boundaries, humans have breached six: climate change, biosphere integrity, freshwater change, land system change, biogeochemical flows and novel entities.
- While atmospheric aerosol loading and ozone depletion remain within the constraints, ocean acidification is close to being breached.
- One of the most concerning evaluations is the overflow of nitrogen and phosphorus — the biogeochemical flow boundary — in the environment. Although nitrogen and phosphorus are essential for life, their widespread use as crop fertilisers is wreaking havoc by, for instance, triggering algal blooms (it can cause entire fish populations to leave an area or even die) and ocean dead zones (a reduced level of oxygen in the water).
- Researchers have also noted that the biosphere integrity boundary was violated in the last 19th century when acceleration in land use caused a strong impact on numerous species. In the case of freshwater, the boundary was breached last century, between 1905 and 1929.
- Another alarming finding is the rising levels of novel entities in the environment. Humans have been releasing unprecedented amounts of synthetic chemicals like pesticides and plastic, without adequate safety testing for decades. This is destabilising and harming the Earth's system.
- Among the violated boundaries, there is also the land system change. "Land-use conversion and fires are causing rapid change in forest area, and deforestation of the Amazon tropical forest has increased such that it has now transgressed the planetary boundary," the study says.

(more ahead)

Cont'd

- For climate change, the analysis notes that both the atmospheric CO₂ concentration and radiative forcing are steadily increasing. For instance, CO₂ concentration currently stands at 417 parts per million (ppm), whereas it was just 280 ppm before the Industrial Revolution. Its safe boundary limit is 350 ppm, which was breached in the 1980s.



Can Earth's health still recover?

- The transgressed boundaries can be brought back into "safe operating space" if humans do away with fossil fuel burning and end destructive farming.
- Notably, the one improving boundary, the stratospheric ozone depletion boundary, is recovering owing to the combined international efforts initiated by the Montreal Protocol in 1987. Researchers say this level of coordinated change may help in dealing with other boundaries.

Cats hunting down India's birds in alarming numbers



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- On the basis of 30 million observations by more than 30,000 birdwatchers, the 'State of Indian Birds 2023' exercise recently concluded that birds in India are faring poorly. Among many factors, the report acknowledged a silent bird-killer lurking in India's urban areas: cats.
- Cats may seem to pale in the shadow of the threats posed by forest degradation, industrialisation, and climate change, but conservationists know better. In the U.S. alone, free-ranging domestic cats have been estimated to kill billions of birds every year.
- One study found that cats may be the "single greatest source of anthropogenic mortality" for birds and mammals in the U.S.
- Worldwide, free-ranging domestic cats have caused or contributed to dozens of extinctions of bird species recorded in the IUCN Red List.



'Landscape of fear'

- As per a survey done by an ecologist in Dehradun, pet cats hunted birds the most, followed by reptiles, insects, rodents, and amphibians. Notably, Dehradun has 590 of the 1,359 species of birds recorded in India.
- As per this ecologist, while free-ranging dogs also harm wildlife, cats have retained the instinct to hunt through many years of domestication, even if they don't need the skill anymore. Since cats can climb, they can reach habitats such as the birds' nests.
- Cat saliva is also more likely to contain bacteria that are lethal to birds. So if the direct impact of an attack doesn't kill them, the bacteria will. As per an urban wildlife rescuer, this could be why most cat-attacked birds reported to her didn't survive treatment.
- Cats also maintain a 'landscape of fear'. "This means that when cats are known to be in a particular area, the bird would avoid foraging or nesting there."

The 'trap, neuter, return' policy



- Domestic cats (*Felis catus*) weren't always this widespread. Palaeogenetic studies have found that wildcats (*Felis sylvestris*) were probably first domesticated in West Asia some 10,000 years ago.
- They spread via sailing ships much later. Today, they are one of the world's 100 worst invasive alien species.
- The proper way to deal with the cat problem has spiralled into a vicious debate in the west.
- Animal welfare groups usually advocate the 'trap-neuter-return' (TNR) policy, whereby stray cats or dogs are trapped, sterilised, and returned in the hope that this will reduce their populations. This is considered a humane approach because it could improve the quality of a cat's life as well.

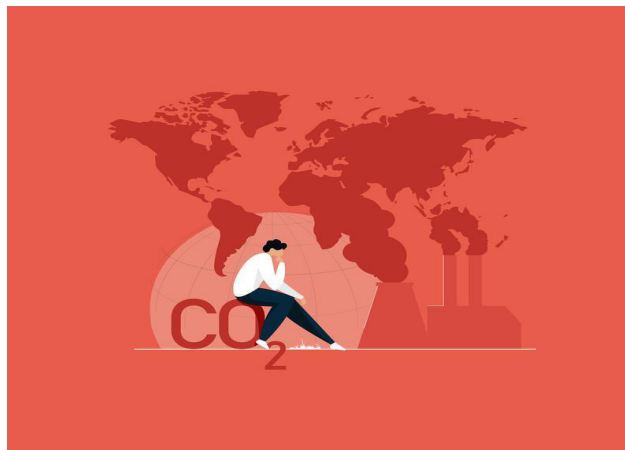
Global Stocktake Report calls on countries to do more to tackle the climate crisis



Relevance: Prelims & Mains Paper III; Environment

Why in news?

- Ahead of the just concluded G-20 summit, that saw several world leaders converge in New Delhi, the United Nations climate secretariat made public a 'synthesis report' on the results of three meetings held so far to discuss progress achieved by countries in achieving the goals of the Paris Agreement of 2015.



Etymology

- This synthesis report is based on a larger exercise called the 'global stocktake,' that is expected to take place once in five years.
- In 2015, when countries committed in Paris to keep global temperatures from rising beyond 2 degrees Celsius by the end of the century and "as far as possible" below 1.5 degrees Celsius, they also agreed to periodically review, or take stock of efforts, made by individual countries in containing greenhouse gases and transitioning their fossil-fuel dependent energy systems to renewable sources.
- The first report this year is expected to significantly influence discussions in November when country representatives converge in Dubai for the 28th edition of the UN climate Conference of Parties (COP).
- While countries have laid out their Nationally Determined Contributions (NDC), they are expected to — but not obliged to — increase their ambitions every five years.
- While the latest NDC were submitted in 2020, a stocktake also aims to push countries to set higher targets before the next NDCs are publicised in 2025.

An overview



- This report lays out 17 'key findings' that overall suggests that the world is not on track to achieve Paris Agreement targets, though there was still a "rapidly narrowing" window for countries to get their act together.
- Notably, the 2022 synthesis report in which the NDCs of 166 countries were analysed also concluded that they were inadequate to meet Paris-agreed targets.
- The United Nations Emissions Gap Report, also released last year, reported that 23 billion tonnes of CO2 were required to be cut to keep emissions in line with Paris agreements, whereas current pledges by countries even if fully implemented would only cut 2-3 billion tonnes, leaving an emissions gap of around 20 billion tonnes.

Key findings

- The 17 headline statements in this report say that the Paris Agreement has galvanised countries into setting goals and signalling the urgency of the climate crisis.
- Govts need to support ways to transition their economies away from fossil fuel businesses and that states and communities must strengthen efforts. While rapid change could be "disruptive," countries should work on ensuring that the economic transition be equitable and inclusive.
- It stated that much more ambition was needed to reduce global greenhouse gas emissions by 43% by 2030 and further by 60% in 2035 and reach net zero CO2 emissions by 2050 globally.
- Renewable energy has to be scaled up and all 'unabated fossil fuels' (for example, coal plants without carbon capture and storage mechanisms) were to be rapidly eliminated.
- Deforestation and land-degradation have to be halted and reversed and agricultural practices critical to reducing emissions and conserving and enhancing carbon sinks have to be encouraged.
- Averting, minimising and addressing 'loss and damage,' requires urgent action across climate and development policies to manage risks comprehensively and provide support to impacted communities.
- Financial flows needed to be made consistent with climate-resilient development to meet urgent and increasing needs.

SCIENCE & TECHNOLOGY

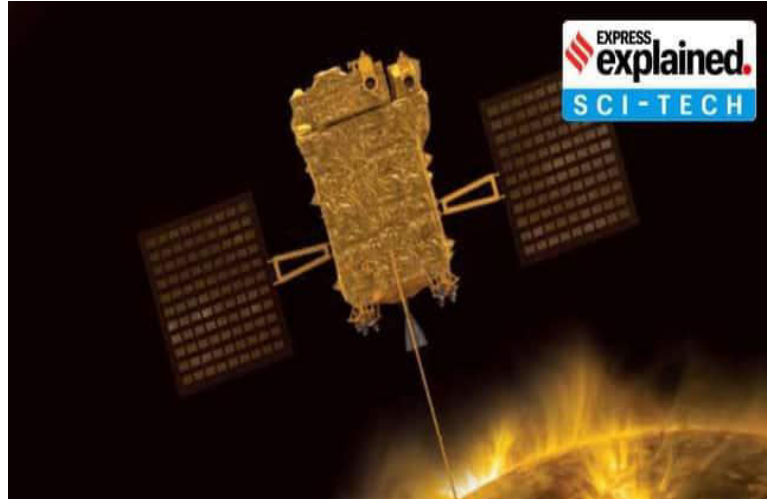
Sun mission - Aditya-L1



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

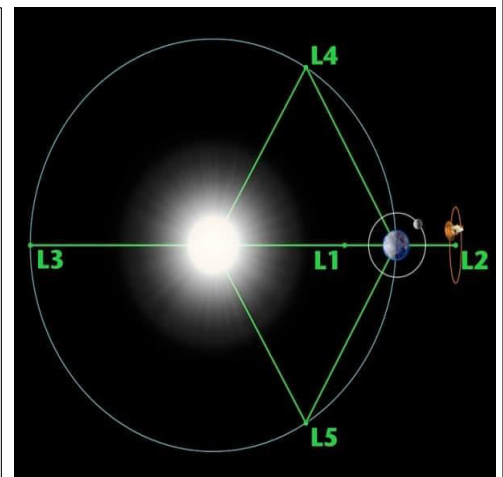
- The Indian Space Research Organisation (ISRO) has announced that the Aditya-L1 mission, the first space-based Indian observatory to study the Sun, will be launched on Sept. 2 from Sriharikota.



Destination

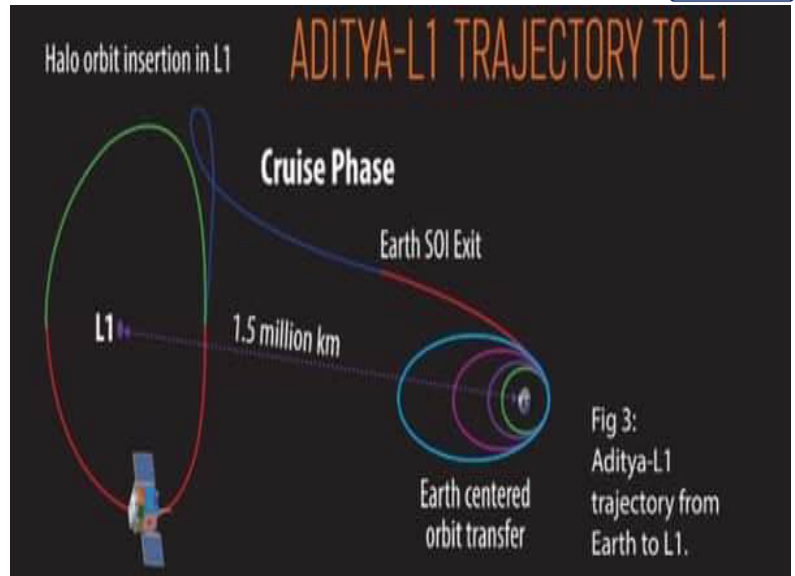


- This spacecraft will be placed in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, which is about 1.5 million km from the Earth.
- A Lagrange point is a position in space where the gravitational pull of two large masses precisely equals the centripetal force required for a small object to move with them. These points in space can be used by spacecraft to reduce fuel consumption needed to remain in position.
- Basically, this means that at that point, the gravitational attraction and repulsion between two heavenly bodies is such that an object placed between them will effectively stay in the same relative position while moving with them.
- A satellite placed in the halo orbit around the L1 point has the major advantage of continuously viewing the Sun without any occultation/eclipses. This will provide a greater advantage of observing the solar activities and its effect on space weather in real-time.
- The Lagrange points are named in honor of Italian-French mathematician Joseph-Louis Lagrange, and there are five of them: L1, L2, L3, L4, and L5.



What will this mission study?

- This spacecraft carries seven payloads to observe the photosphere [the deepest layer of the sun we can directly observe], chromosphere [the layer about 400 km and 2,100 km above the photosphere], and the outermost layers of the Sun (the corona), using electromagnetic and particle and magnetic field detectors.
- These payloads are expected to provide most crucial informations to understand the problem of coronal heating, coronal mass ejection, pre-flare and flare activities and their characteristics, dynamics of space weather, propagation of particle and fields etc.



Importance of studying the Sun

- Every planet, including Earth and the exoplanets beyond the Solar System, evolves — and this evolution is governed by its parent star. The solar weather and environment affect the weather of the entire system.
- Variations in this weather can change the orbits of satellites or shorten their lives, interfere with or damage onboard electronics, and cause power blackouts and other disturbances on Earth. Knowledge of solar events is key to understanding space weather.
- To learn about and track Earth-directed storms, and to predict their impact, continuous solar observations are needed. Every storm that emerges from the Sun and heads towards Earth passes through L1.

Scientists finally finish sequencing 'weird' male Y chromosome



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The Y chromosome is a never-ending source of fascination (particularly to men) because it bears genes that determine maleness and make sperm. It's also small and seriously weird; it carries few genes and is full of junk DNA that makes it horrendous to sequence.
- However, new "long-read" sequencing techniques have finally provided a reliable sequence from one end of the Y to the other.
- The findings provide a solid base to explore how genes for sex and sperm work, how the Y chromosome evolved, and whether – as predicted – it will disappear in a few million years.



Making 'baby boys'

- It is long known that specialised chromosomes determine birth sex in humans and other mammals. Females have a pair of X chromosomes, whereas males have a single X and a much smaller Y chromosome.
- The Y chromosome is male-determining because it bears a gene called SRY, which directs the development of a ridge of cells into a testis in the embryo. The embryonic testes make male hormones, and these hormones direct the development of male features in a baby boy.
- Without a Y chromosome and a SRY gene, the same ridge of cells develops into an ovary in XX embryos. Female hormones then direct the development of female features in the baby girl.

'A DNA junkyard'

- The Y chromosome is very different from X and the 22 other chromosomes of the human genome. It is smaller and bears few genes (only 27 compared to about 1,000 on the X).
- These include SRY, a few genes required to make sperm, and several genes that seem to be critical for life – many of which have partners on the X.
- The Y also has a lot of DNA sequences that don't seem to contribute to traits. This "junk DNA" is comprised of highly repetitive sequences that derive from bits and pieces of old viruses, dead genes and very simple runs of a few bases repeated over and over.



Reason why the Y is 'weird'?

- There is a lot of evidence that 150 million years ago the X and Y were just a pair of ordinary chromosomes (they still are in birds and platypuses). There were two copies – one from each parent – as there are for all chromosomes.
- Then SRY evolved on one of these two chromosomes, defining a new proto-Y. This proto-Y degenerated fast, losing about 10 active genes per million years, reducing the number from its original 1,000 to just 27.
- There has been great debate about whether this degradation continues, because at this rate the whole human Y would disappear in a few million years (as it already has in some rodents).

Sequencing Y was a nightmare



- The first draft of the human genome was completed in 1999. Since then, scientists have managed to sequence all the ordinary chromosomes, including the X, with just a few gaps. They've done this using short-read sequencing, which involves chopping the DNA into little bits of a hundred or so bases and reassembling them like a jigsaw.
- But it's only recently that new technology has allowed sequencing of bases along individual long DNA molecules, producing long-reads of thousands of bases. The Y is the last human chromosome to have been sequenced end-to-end. Notably, researchers had to make several attempts in this pursuit.

What's new on the Y?



- The Y turns out to be just as weird as scientists expected from decades of gene mapping and the previous sequencing.
- Now, scientists will examine the details of Y genes. They will look for sequences that might control how SRY and the sperm genes are expressed, and to see whether genes that have X partners have retained the same functions or evolved new ones.
- Others will closely examine the repeated sequences to determine where and how they originated, and why they were amplified. Many groups will also analyse the Y chromosomes of men from different corners of the world to detect signs of degeneration, or recent evolution of function.

Scientists found LK-99 to be probably not a superconductor



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- Most electrical conductors resist the flow of electric current, converting some of the electrical energy into heat. With a heater, we use this effect to generate the warmth that we feel.
- While this property of conductors allows us to stay warm in the winter, in most instances, it is undesirable. For e.g, a substantial amount of electricity generated is lost while being transmitted between power plants and our factories and households as heat.
- Tiny wires inside computers and cellphones dissipate heat, draining the batteries in the process. So it is natural that scientists are looking for materials that can conduct electricity without resistance, especially for applications where heat loss is a deal-breaker.

An elusive material!

- More than a century ago, scientists discovered that many metals become superconductors – i.e. allow current to flow with zero resistance – if cooled to below -250°C . To know the reason behind it, scientists developed a theory of superconductivity.
- With this theory, they found that superconductors aren't just materials with zero resistance: they have a remarkable new quantum state in which the electrons in the material work together.
- Several fantastic properties of superconductors then came to light, opening the door to new technologies – including advanced medical imaging, 'maglev' trains, and quantum computers.
- However, superconductivity also remained an extremely-low temperature-phenomenon for a long time. It was only in the mid-1980s that scientists discovered copper-oxide superconductors, whose transition temperature was higher than -200°C .
- But to this day, scientists haven't made significant progress to elevate this figure to at or near ambient conditions.

Surprise and scepticism

- In July 2023, a group of scientists in South Korea claimed that a lead apatite material was an ambient condition superconductor. Apatites are materials that have a regular arrangement of tetrahedrally shaped phosphate ions (i.e. one phosphorus atom and four oxygen atoms).
- While apatites have been well-studied, no one had anticipated that they could be superconductors – let alone one in ambient conditions.
- The novelty of the South Korean group's work was to replace 10% of the lead ions in lead apatite with copper, to produce the supposed wonder material that they had named LK-99 (after their own last names).



Independent verification

- In their papers, the group described **subjecting their LK-99 samples to a variety of tests. They measured the material's electric resistance, which seemed to drop below a certain temperature.**
- They showed that the **low resistance state vanished when a sufficiently strong magnetic field was applied. They also showed that the resistive state was restored if a sufficiently large amount of current was passed through the sample. They even included an image of the sample partially levitating over a magnet in their second paper – a famous test for superconductivity.**
- But while all of these data suggested superconductivity, the group **also missed several crucial tests, including some to confirm the quantum nature of the microscopic state of the system.**
- Since the South Korean team had **provided instructions to synthesise LK-99, researchers in Australia, China, India, the U.S., and several European countries tried to replicate their findings – but no one found conclusive evidence of superconductivity in their samples. In fact, the Indian group, from the CSIR-National Physical Laboratory, New Delhi, was one of the first to report that it didn't find any signs of superconductivity in LK-99.**
- At least one group was able to make **a highly pure crystal that was also transparent, which was unusual for a superconductor. More remarkably, this single crystal behaved like an insulator, showing no signs of superconductivity from low temperatures up to 800° C. It was also ferromagnetic – i.e. it could be magnetised by, say, rubbing a magnet on it. Superconductors cannot have this property.**

The wait continues...

- The South Korean LK-99 samples had shown **a jump in resistance at almost the same temperature, meaning that the exciting graphs in their papers were due to copper sulphide rather than LK-99.**
- The current evidence suggests that LK-99 is not a superconductor. Thus, it can be safely said that **we are yet to find an ambient-condition superconductor.**

Reliance Jio to launch fixed wireless broadband service - Jio AirFibre



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- In what could offer a fresh impetus to Internet connectivity in Indian homes, Reliance Jio has announced the launch of its fixed wireless broadband solution, which will leverage the telco's 5G network.
- The offering, called Jio AirFibre will be launched on September 19. It is expected to bring in close to 200 million paying users to the network over the next three years.
- Notably, Jio's arch rival Bharti Airtel had recently launched a similar product based on 5G technology in Delhi and Mumbai, called Xstream AirFiber.

Beginning of a new market

- In 2016, as Jio launched its 4G services, it also disrupted the Indian telecom market forever — bringing down the cost of mobile data significantly and leading to a boom in data consumption across the country.
- While the effects of that were largely felt for mobile users, with AirFibre, Jio is looking to replicate some of that success in India's dwindling and minuscule home broadband market.
- As per Reliance Jio, JioAirFiber will use the company's 5G network coverage and "advanced wireless technologies" to bypass the need for last-mile fibre. It expects that the result could increase daily connections by nearly ten times.

The broadband market scenario in India

- Even as India has seen a significant uptake in mobile Internet users, home broadband coverage remains patchy. According to data released by the Telecom Regulatory Authority of India (TRAI), there were a little over 35 million wired broadband subscribers in the country as of June 2023.
- The fixed wireless broadband market is tinier — around 950,000 subscribers as of June end.
- The current wired broadband companies are Reliance Jio (9.17 million), Bharti Airtel (6.54 million), BSNL (3.66 million), Atria Convergence (2.16 million) and Hathway (1.12 million).

AirFibre's potential impact

- As per an analysis, currently, Jio Fibre reaches 10 million homes and its optical fibre cable spans over 1.5 million km.
- With Jio AirFiber, it has the potential to connect up to 150,000 homes every day.
- The expansion in the homes' segment may open up market around smart home solutions as well.



New Covid-19 variant - 'Pirola' may be 'reason to worry'



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- A recent article has noted the rise of Covid-19 infections in multiple countries, driven by a new Coronavirus variant called BA.2.86. It is informally being termed 'Pirola'.
- While it is too early to know if this strain is any more transmissible than other ones, there may be a reason to worry. This is because this variant has "more than 30 mutations to its spike protein compared to XBB.1.5, a variant of Omicron that had been the dominant strain in the U.S. The spike protein is how the coronavirus enters human cells.
- Pirola has been witnessed in the US, the UK, and other countries, in unrelated cases.
- Notably, the high number of mutations is a point of concern here. This was similar to the number of mutations that differed between Delta, one of the early strains of the coronavirus, and Omicron (that was dominant in the winter of 2021).
- The other concern is that this strain has been picked up in at least six countries, and the cases are unrelated. This suggests some degree of transmission in the [international] community that isn't being detected.



Mutation of Viruses

- It is natural for all viruses to mutate over time and such changes are particularly common in viruses that have RNA as their genetic material, as in the case of coronaviruses and influenza viruses.
- Once a virus enters the human body, its genetic material — RNA or DNA — enters the cells and starts making copies of itself which can infect the other cells. Whenever an error occurs during this copying process, it triggers a mutation.
- Occasionally, a mutation comes along when the genetic mistakes that are introduced while copying prove to be advantageous for the virus — these help the virus copy itself or enter human cells more easily.
- Whenever a virus is widely circulating in a population, the more it spreads and replicates, its chances of mutating increases.

What differentiates Pirola?



- As per an expert, Pirola is a "much more interesting subvariant", when compared to the Omicron subvariant known as XBB.1.9. That variant initially spread quickly but did not overwhelm populations at a significant scale.
- The same report noted that it has been detected by surveillance labs in Israel and Denmark and later in labs in England, South Africa, and the U.S.
- So far, no deaths have been reported among cases, according to the WHO. As of a few weeks ago, rising Covid-19 cases in the US were mostly a result of the Eris variant.

Precautions

- There is **not enough evidence right now** to conclude **whether Pirola could lead to more severe disease, death, or hospitalization.**
- **Since it's still the same virus at its core,** so the same prevention methods — **masking, vaccination, and hand-washing, among others can help people avoid infection.**

Delhi High Court allows stem cell therapy for two autistic kids

Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- The Delhi High Court recently permitted two children with autism spectrum disorder (ASD) to undergo stem cell therapy for treatment of their condition.
- The order came in **a petition moved by family members of the two children, challenging a 2022 recommendation of the Ethics and Medical Registration Board (EMRB) of the National Medical Commission (NMC) against the use of stem cell treatment for ASD.**



What are stem cells?

- Simply put, stem cells are cells from which all other cells, with their respective specialised functions, are generated. The human body, under certain conditions, “divides” stem cells to either create new stem cells or cells with specific functions, such as blood cells, brain cells, bone cells, muscle cells, etc.
- There are two main categories of stem cells: pluripotent stem cells, or cells with the ability to differentiate into all of the cells of the adult body, and adult stem cells, which are tissue or organ-specific and regenerate to form cells only of that particular organ.
- In 2006, researchers identified conditions that would allow some mature human adult cells to be reprogrammed into an embryonic stem cell-like state. Those reprogrammed stem cells are called induced pluripotent stem cells.

How are stem cells used in medicine?

- The regenerative properties of stem cells make them extremely valuable in medicine. This is why stem cell treatments are also termed as regenerative medicine.
- For long, hematopoietic stem cell transplantation has been used to treat people with conditions such as leukaemia and lymphoma. After chemotherapy wrecks the patient's healthy cells (along with the cancerous ones), a donor's healthy bone marrow reintroduces functional stem cells to replicate inside of a patient and to produce additional normal blood cells.
- There are typically a very small number of adult stem cells in each tissue, and once removed from the body, their capacity to divide is limited. This is the fundamental limitation of stem cell therapies at the moment. That is why, scientists have been focussed on manipulating adult stem cells to exhibit characteristics of pluripotent stem cells.

What is autism spectrum disorder?

- Autism spectrum disorder is a neurological and developmental disorder that affects how people interact with others, communicate, learn, and behave.
- People with ASD often have difficulty with communication and interaction with other people, restricted interests and repetitive behaviours, and symptoms that affect their ability to function in school, work, and other areas of life.
- Currently, there is no cure for ASD – treatments and therapies are geared towards managing symptoms and helping someone with ASD lead a happy and functional life.

Can stem cell treatment be used for ASD?

- According to some experts, ASD has potential to be a good candidate for stem cell therapy because evidence exists that some types of stem cells, given intravenously, can improve the overall regulation of the immune system and the neural connectivity in the brain.
- However, stem cell therapy is not typically used for treating ASD yet, and initial clinical trials have shown mixed results. Currently, the treatment is very much in an experimental stage and there is simply not enough data to make definitive claims.
- This is why EMRB made recommendations against its use. It has warned of so-called “predatory marketing” of stem cell therapy “which gave false hope” to parents and caregivers regarding the possibility of “curing” ASD.
- Crucially, the High Court has not spoken out on the general validity of using stem cell therapies for ASD, but in these two cases, has allowed ongoing treatment to continue. The HC bench said that the NMC is permitted to take a final view on the recommendation as per provisions of the NMC Act.

Toyota showcases flex-fuel prototype



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- Toyota recently unveiled a prototype of the Innova Hycross with a flex-fuel hybrid powertrain, its first car in India with this option, and one that the Japanese carmaker claims is the world's first BS6 Stage II-compliant flex-fuel vehicle.
- Toyota had displayed an imported Corolla flex-fuel hybrid sedan as a pilot project late last year. The pilot was initiated as part of a govt-led push to commercially deploy this technology, which is already in use in markets such as Brazil, Canada, and the United States.



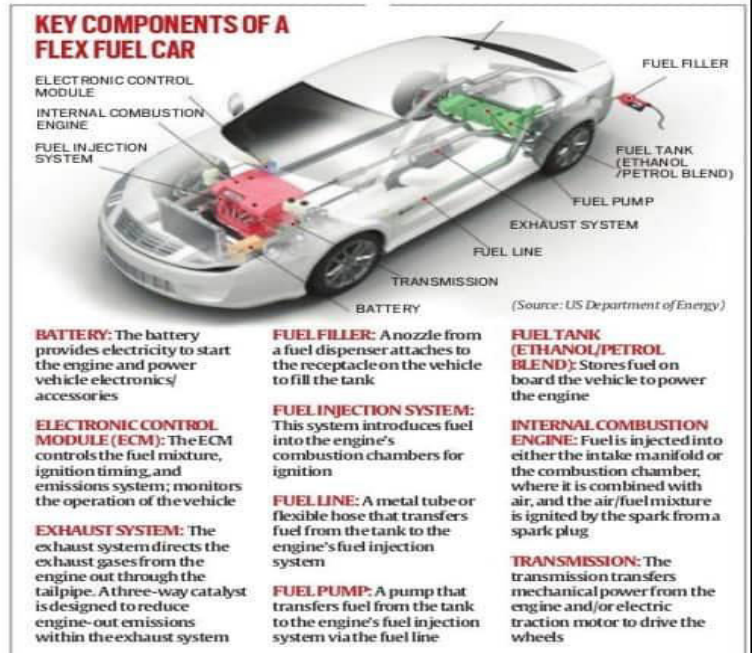
Hycross prototype



- The Hycross flex-fuel prototype has a 2-litre Atkinson Cycle petrol engine coupled with an electric motor, the same as in the hybrid version of the standard Hycross.
- Toyota claims the prototype can run on petrol with more than 20% ethanol blending that is currently mandated in India, and that its performance would be at par with the standard Hycross hybrid, even with ethanol-blended petrol. It adds that this car will achieve low carbon emissions "on a comprehensive well-to-wheel basis". Like the standard strong hybrid variant, the Hycross flex-fuel prototype would run 60% of the time in the electric vehicle mode using energy stored in the battery pack.
- A flex-fuel vehicle typically has an internal combustion engine (ICE), but unlike a regular petrol vehicle, it can run on more than one type of fuel, or a mixture of these fuels.
- The most common versions use a blend of petrol and ethanol or methanol. Flex-fuel vehicles such as the prototype Hycross can run on blends of ethanol that are far higher than the current standard 20% mix (E20). This is made possible by equipping the engine with a fuel mix sensor and an engine control module (ECM) programming that senses and automatically adjusts for any ratio of designated fuels.
- The flex engines push is part of the govt's broader strategy to cut dependence on imported crude in the medium-to-long run.

How these cars work?

- Most components in a flex fuel vehicle are the same as those in petrol-only cars. But some special ethanol-compatible components are required to adjust to the different chemical properties and energy content in ethanol/methanol, such as modifications to the fuel pump and fuel injection system.
- The ECM is also calibrated to accommodate the higher oxygen content of ethanol. The hybrid engine of the type used in the Toyota Hycross would have separate spark plugs, piston ring tops, and valves to render them more corrosion-resistant, and a modified catalyst in the exhaust system to lower hydrocarbon emissions.
- The vehicle's fuel filter and fuel lines have also been tweaked. As of 2018, there were more than 21 million flex-fuel vehicles in the US, but Brazil was the biggest market and leader in this segment.



Flex pros and cons

- The use of ethanol blending sharply lowers harmful pollutants such as carbon monoxide, sulphur, and carbon and nitrogen oxides. Blending will also help cut oil imports to fuel vehicles. However, flex-fuel cars typically take a 4-8% hit on fuel efficiency when using ethanol for motive power.
- So, while fuel economy is generally lower with increased levels of ethanol, many flex fuel vehicles have improved acceleration performance when operating on higher ethanol blends. Another problem with ethanol blending is that source crops such as sugarcane are usually very water-intensive.
- In 2019-20, more than 90% of the ethanol produced in the country came from sugarcane, which is also a politically important crop in states such as Maharashtra and Uttar Pradesh.
- The National Biofuel Policy 2018 envisages a 2025 target of 20% blending. Countries such as Brazil can be flexible on the degree of the mix depending on crude prices, varying it when energy prices rise like they did after the Ukraine war.
- In Brazil, nearly all cars are required to be able to handle fuel blends with a minimum of 22% ethanol, and the state-owned oil company Petrobras is mandated to buy ethanol and dispense the mix at retail pumps.
- As a result, almost no light vehicle in Brazil runs on pure petrol. There is also a govt subsidy to narrow the price gap of higher ethanol blends, in order to make the proposition viable. This is a factor that would have to be considered as India steps up its fuel blending plan.

Blending advantages

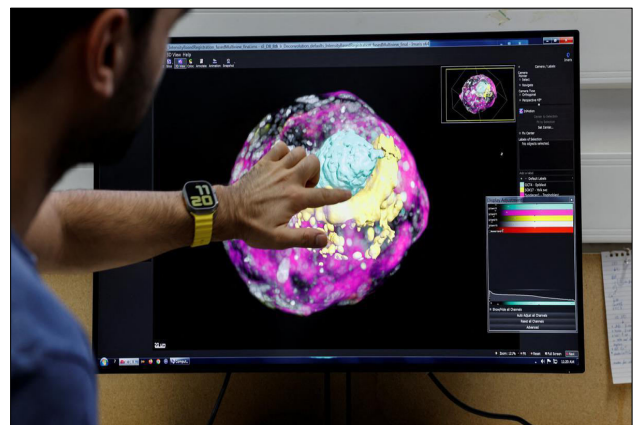
- The ethanol mix in petrol in India went up from 1.53% in 2013-14 to 11.5% in March 2023. This has helped cut the oil import bill by an estimated Rs 41,500 crore in the last eight years.
- The expected implementation of E20 by April 2025 is estimated to result in annual savings of Rs 35,000 crore in India's oil import bill.
- To overcome the challenges of lower fuel efficiency of flex-fuel vehicles, electrified flex-fuel vehicles are being introduced, which offer the advantages of both a flex-fuel engine and an electric powertrain, as in the case with the Hycross prototype.


Scientists grew whole model of human embryo without sperm or egg


Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- Scientists have successfully grown a "human embryo" in the lab without using an egg or sperm.
- They used a mix of stem cells — early cells that have the ability to differentiate into other types of cells — that was able to spontaneously assemble into an embryo-like structure, mimicking molecular characteristics of an early embryo.



The creative process	Importance of embryo research	
<ul style="list-style-type: none"> - The scientists have called it one of the most complete models of a 14-day-old human embryo. Around six such models have been published this year itself. None of them fully replicate the processes that happen during the early stages of embryo development, but all of them add to their understanding. - The researchers from Israel used a mix of stem cells and chemicals in this regard. - One of the problems they faced, however, was that only 1% of this mixture actually assembled spontaneously, making the process not very efficient. 	<ul style="list-style-type: none"> - There is no way for scientists to ethically research the early stages of development of an embryo, as it is difficult to study it after it implants in the uterus. Scientists currently study these initial changes in various lab models or donated embryos. - This research is crucial because the initial days of embryo development is when the majority of miscarriages and birth defects occur. Studying the initial stages may help understand genetic and inherited diseases better. - The understanding of why some embryos develop normally, retain the proper genetic code, and implant properly in the womb while others do not, may also help in improving success rates of in vitro fertilisation. 	

Limitations!	Role of model embryos in DNA studies	
<ul style="list-style-type: none"> - Notably, lab-grown embryos cannot be used to get pregnant. These models are meant to just study the early stages of development of a foetus. - It is generally accepted — and legally supported in most countries — that these embryo models will be destroyed after studying the first 14 days. Attempts to implant are not allowed. - The limit was first proposed by a committee in the UK in 1979 after the birth of the first test tube baby Louise Brown demonstrated that embryos could be kept alive in laboratories. The 14-day period is equivalent to when embryos naturally finish implantation. It is also when cells start becoming an “individual”, and breaking off into a twin is not possible. - Also, creating a lab-based model that mimics the properties of early embryos is still far from an actual embryo that can implant to the lining of the womb. 	<ul style="list-style-type: none"> - Models such as the one developed by the team from Israel have helped scientists understand why sometimes errors arise when the DNA is duplicated, and why sometimes one of the daughter cells receives too many or too few chromosomes. - These models allow scientists to see what roles various genes play in the development of the foetus. 	

EU forces Apple to switch to USB-C in iPhone15



Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- Apple recently launched iPhone 15. The new iPhone range features Apple's first new charging technology in more than a decade — a USB-C charging port instead of the company's proprietary 'lightning' connector.
- This design change has been forced on Apple by European Union (EU) rules that require smartphones and other electronic devices to have a USB-C port by the end of 2024.
- Apple had initially fought back, claiming the rule would "stifle innovation" and "increase" wastage, but ended up complying well before the deadline kicked in, not just in the EU, but across geographies.



Need behind this change

- The lack of a single charger solution in the last decade has piled up to 11,000 tonnes of e-waste every year from disposed and unused chargers, and more than 2 billion euros spent annually on standalone chargers.
- In addition to that, there was also a lack of interoperability between different brands or models, poor safety requirements, costs for adaptors and proprietary chargers, unpredictable charging times, and failed or lost chargers.

Significance

- Apple made the last major change in its charging ports back in 2012, when it introduced the lightning proprietary tech. And this tech was widely expected to remain this way— had it not been for the spirited EU pushback.
- With the USB-C now featuring across its four new iPhone 15 models, these ports will be the same as those found on Android phones, most Windows laptops, Macbooks and iPads, and pretty much every other consumer gadget or device.
- The EU's common charger rules have the potential to set a global standard, on the lines of the EU's data protection rules rolled out in 2018 that have been customised and adapted by more than 100 countries.



The Indian scenario

- The Bureau of Indian Standards (BIS) has notified standards for Type-C chargers and the govt is in the process of prescribing two common types of charging ports for mobiles and wearable electronic devices.
- The Ministry of Consumer Affairs wants original equipment manufacturers (OEMs) to make USB-C a standard charging port for all electronic devices by March 2025, which is six months after the passage of the EU deadline.

Engineers Day: The story of M Visvesvaraya, India's pioneering civil engineer

Relevance: Prelims & Mains Paper III; Science & Technology

Why in news?

- September 15 is marked as the birthday of Sir Mokshagundam Visvesvaraya (1861-1962), credited for his role as a civil engineer and administrator in colonial India.
- Born in 1861, in Karnataka, Visvesvaraya completed his school education in his hometown and later on went to study at the University of Madras.
- He then pursued a diploma in civil engineering. Having played a role in major public works projects across the nation, he later wrote two books on the Indian economy.

Early life

- After completing his engineering, Visvesvaraya worked as an Assistant Engineer in the Public Works Department (PWD) of the Government of Bombay.
- One of his first projects was to construct a pipe syphon across one of Panjra river's channels. In 1909, he joined the Mysore service as Chief Engineer, ultimately assuming the position of the 19th Dewan of Mysore.
- He took voluntary retirement in 1918 after which he presided as chairman or became a member of various committees.

Significant works



- Some of Visvesvaraya's significant works include the introduction of the block system of irrigation in the Deccan canals in 1899, solving the problem of the "muddy and discoloured" water in the city of Sukkur located on the banks of the Indus river and inventing automatic gates meant to regulate the flow of water in reservoirs, which is patented.
- He also travelled abroad a few times and sought to understand aspects of other countries' systems.
- Visvesvaraya was instrumental in the setting up of the University of Mysore in 1916.

IAF takes delivery of the first C295 aircraft from Airbus


Relevance: Prelims & Mains Paper III; Science & Technology




Why in news?

- The Indian Air Force (IAF) recently received the first of the 56 C295 aircraft at the Airbus production site in Seville, Spain.
- These planes are set to replace its ageing Avro-748 fleet.
- This marks the beginning of a new era where military aircraft would be manufactured in India.
- This is also the first time that Airbus is building a complete production system outside Spain, which was unprecedented given the time and various supply chain constraints.



What is the C295 aircraft?	The deal 
<ul style="list-style-type: none"> - The C295 is a versatile tactical transport which can perform a variety of missions, such as carrying troops and cargo, maritime patrol, airborne warning, surveillance and reconnaissance, armed close air support, medical evacuation, VIP transport, and airborne firefighting. - The aircraft can carry up to nine tonnes of payload or up to 71 personnel at a maximum cruise speed of 260 kts. It is also equipped for air-to-air refueling of fixed-wing aircraft and helicopters. - It can cruise at altitudes up to 30,000 ft and can quickly take off from and land at unpaved, soft, and sandy/grassy airstrips. - With 283 orders from 41 operators, the aircraft have logged a combined 500,000 flight hours. 	<ul style="list-style-type: none"> - India formalised the acquisition of 56 Airbus C295 aircraft at a cost of Rs 21,935 crore in 2021. - The first 16 C295s will be assembled in Seville, Spain with the second aircraft due to be delivered in May 2024 and the next 14 rolled out at a rate of one per month until August 2025. They will be delivered in fly-away condition. - The remaining 40 will be manufactured and assembled – in partnership with Tata Advanced Systems Limited (TASL) – at a Final Assembly Line (FAL) in Gujarat's Vadodara. - Six IAF pilots have already received training and a batch of 20 maintenance crew of the IAF is currently being trained at the Airbus facility in Seville.

Significance of this acquisition	The indigenous factor 
<ul style="list-style-type: none"> - The acquisition of the aircraft is significant for two reasons: First, it will replace the legacy Avro fleet of the IAF, which was acquired in the 1960s, and thus provide a fillip to the IAF's air transport duties in carrying troops and material to different parts of the country. - Secondly, the acquisition sets into motion India's first-ever 'Make in India' Aerospace programme in the private sector, under which the aircraft will be manufactured. - So far, the state-owned Hindustan Aeronautics Limited (HAL) has had a monopoly over the manufacture of military aircraft in India. - This will boost India's aerospace sector with 15,000 high-skilled jobs and 10,000 indirect jobs in the next 10 years. 	<ul style="list-style-type: none"> - Barring major components such as the engine and avionics – which have been sourced from the US-based Pratt & Whitney and Collins Aerospace – there will be a transfer of manufacturing technology to TASL by Airbus on most other components so that 95% of the aircraft could be made in India within the next few years. - The aircraft will be equipped with indigenous radar warning receivers and missile approach warning systems. - It is expected that the 32nd aircraft, which is scheduled for delivery in the first quarter of 2029, will be nearly a fully Indian C295. - Airbus would provide spares support for 10 years and a performance-based logistics contract for five years, ensuring the availability of 85% of the aircraft fleet to the force at any given time.

Scientists figure out how brain cells die, will help in Alzheimer's treatment

Relevance: Prelims & Mains Paper III; Science & Technology



Why in news?

- About 55 million people worldwide live with some form of dementia — of which Alzheimer's is just one such disease.
- Two-thirds of people with dementia live in developing countries. As the global population ages, it is estimated that the number of dementia cases will grow to about 139 million by the year 2050. People in China, India, Latin America and Sub-Saharan Africa are likely to be worst hit.
- Researchers have been looking for medical treatments for Alzheimer's for decades, but their successes have been limited.
- There has been new hope, however, since the discovery of an active agent called Lecanemab.
- The drug was approved for use by the US Food and Drug Administration in 2023 and shows signs that it slows the development of Alzheimer's in its early stages.



Complex processes in the brain

- It's been challenging to develop medicines against Alzheimer's because researchers have yet to fully understand what happens in the brain when the disease takes hold. One of the most pressing questions is why brain cells die.
- Researchers know that amyloid and tau proteins develop in the brain, but until recently, they did not know how they function together or influence cell death.
- But researchers in Belgium and the UK say they can explain what's happening now.

Mystery of cell death solved

- According to a recent study, there is a direct connection between these abnormal proteins, amyloid and tau, and what's called necroptosis, or cell death.
- Cell death usually happens as an immune response to infection or inflammation and rids the body of undesirable cells. That enables new, healthy cells to grow. When the supply of nutrients collapses, the cells swell up, destroying a plasma membrane. The cells get inflamed and die off.
- In the study, the researchers suggest that cells in Alzheimer's patients get inflamed when amyloid protein gets into neurons in the brain. That changes the internal chemistry of the cells. The amyloid clumps into so-called plaques, and the fiber-like tau protein forms its own bundles, known as tau tangles.
- When these two things happen, the brain cells produce a molecule called MEG3. The researchers attempted to block MEG3 and said that the brain cells survived when they could block it.
- Notably, it was the first time after three to four decades of speculation that scientists had found a possible explanation for cell death in Alzheimer's patients.



Hope for new medicines

- As per researchers based in Europe, their findings will help in the discovery of new medical treatments for Alzheimer's patients.
- Their hope is not without good reason: the drug Lecanemab explicitly targets the protein amyloid. If it's possible to block the MEG3 molecule, medicine may manage to stop cell death in the brain altogether.

Oldest yet fossils of a plant-eating dinosaur found in Rajasthan

Relevance: Prelims & Mains Paper III; S & T

Why in news?

- Dinosaur fossils from the Middle Jurassic period have been found in the Thar desert near the Jaisalmer Basin.
- As per scientists, these remains are of a sauropod dinosaur, which is the same sub-family as the long-necked herbivores in Jurassic Park. These also happened to be the oldest known fossils of this particular kind of sauropod.
- Belonging to the family Dicraeosauridae and from the superfamily Diplodocoidea, these fossils are the first dicraeosaurid sauropods to have been found in India.
- At 167 million years old, they are the oldest known diplodocoid fossils in the world.
- The scientists named the dinosaur Tharosaurus indicus, with Tharo deriving from the Thar desert; saurus from the Greek 'sauros', or lizard; and indicus from its Indian origin.



Size and existence timeline of Sauropods

- As per scientists, the sauropods can grow more than a hundred feet. There are many sauropod groups that are even longer than the blue whale.
- Sauropods first appeared on the earth during the Jurassic period, about 200 million years ago. They were one of the most dominant clades of dinosaurs, surviving until the late Cretaceous period 65 million years ago, when dinosaurs went extinct.

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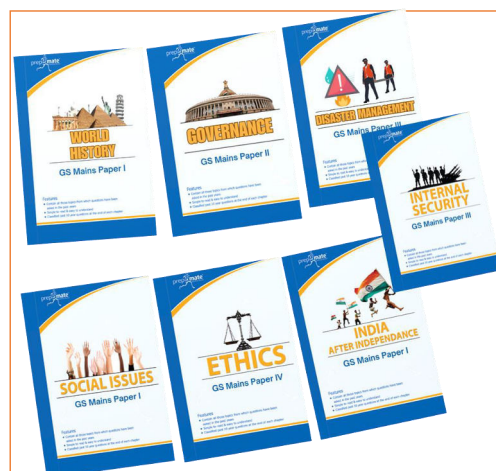


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HISTORY & CULTURE

Sanatan Dharma's concept, roots and the historical context of its use

Relevance: Prelims & Mains Paper I; Social Issues

Why in news?

- Sanatan Dharma, equated by DMK leader Udhayanidhi Stalin to "mosquitoes, dengue, malaria, and corona", is often seen as being synonymous with Hinduism.
- Several BJP leaders have expressed outrage, describing Udhayanidhi's statement as an attack on "our religion".



Etymology and roots of Sanatan Dharma

- Sanatan Dharma is a Sanskrit term that can be translated variously as “eternal religion” or “eternal law”, “unshakeable, venerable order”, or “ancient and continuing guideline”.
- As per a prominent mythologist and author, the word “sanatan”, meaning eternal, does not appear in the Vedas. It started being used in the Bhagavad Gita, and refers to knowledge of the soul, which is eternal.” He adds that Sanatan Dharma refers to eternal religions which believe in soul and rebirth.
- As per another expert, the term ‘Sanatan Dharma’ was used in the Gita by Arjuna, when he told Krishna that “when the clan is vitiated, the sanatan-dharmas of the clan are destroyed”.
- A similar term was used by Draupadi when the onlookers did not speak up on her behalf.
- Although the term is most commonly associated with Hinduism, it is also used by Jains and Buddhists because these religions also believe in rebirth.
- It is only more recently, particularly since the late 19th century, that Sanatan Dharma has been used to signify Hinduism as a religion, distinct from other religions. It is used to evoke a certain homogeneity in Hinduism, without specifying how exactly that homogeneity is constituted.

Sanatan Dharma in the 19th century

- The term Sanatana Dharma gained popularity in the late 19th century with the emergence of various sabhas designed to promote Sanatan Dharma.
- The Sanatan Dharma at that time came to be understood most popularly as a signifier of Hindu orthodoxy that was a reaction to the reform movements being carried out by missionaries and reformers such as the Brahmo Samaj and Arya Samaj. This is believed to be a political necessity of the period. In Punjab, for instance, modern Sanatanist movements trace their growth to the career of Pandit Shraddha Ram. It is believed that when Dayanand Saraswati, the founder of the Arya Samaj, toured Punjab in his efforts to reform Hinduism, Shraddha Ram followed in his wake to strengthen the forces of orthodoxy.
- Similarly, in the Punjab of the 1890s, Pandit Din Dayal Sharma began defending certain religious practices such as murti puja or idol worship against the teachings of the Arya Samaj and established an organisation called ‘Sanatan Dharm Sabha’.
- The national organisation, ‘Bharat Dharma Mahamandal’ that also came up during this period stated as its first objective, “to promote Hindu religious education in accordance with the Sanatana Dharma”. The term was also used by the Hindu Mahasabha to refer to the Hindu religion.
- The idea that Sanatan Dharma was Hindu orthodoxy, and that it was in opposition to reform was entrenched in the social identities of late 19th century India. In the Punjab Census Report of 1891, the Census Superintendent had noted the tendency of orthodox Hindus to record themselves as “sanatan dharmis”.

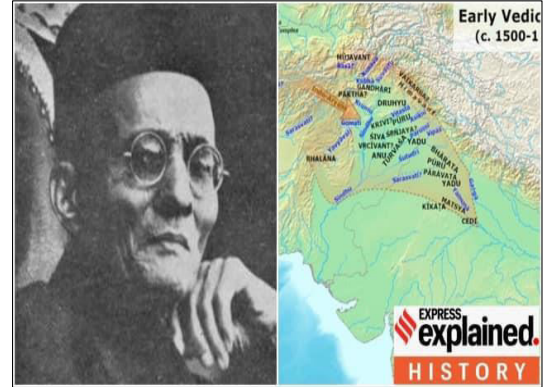
Savarkar's definition of Hindustan and Bharat, Sanatan Dharma and Hindu Dharma



Relevance: Prelims & Mains Paper I; History & Culture

Why in news?

- A political row has erupted after invites for a dinner to be hosted by the President for world leaders, during the upcoming G20 Summit, were sent out in the name of the 'President of Bharat' instead of the customary 'President of India'. While the Opposition said the BJP was pushing the name 'Bharat' because their alliance was called INDIA, the ruling party questioned why the 'Congress had a problem with Bharat'.
- The Constitution mentions both Bharat and India, with Article 1 saying: "India, that is Bharat, shall be a Union of States." Many other names are popularly linked with the nation, such as Hindustan and the older Bharatvarsha and Aryavarta.
- The row over Bharat and India comes at a time of another controversy, over DMK leader Udhayanidhi Stalin's remarks on Sanatan Dharma, is yet to die down.
- Hindutva ideologue Vinayak Damodar Savarkar, in his seminal work Essentials of Hindutva, has dealt with all these topics — the names Hindustan and Bharat, and the difference between Sanatan Dharma, Hinduism, and Hindutva.



Aryans and the Sapta Sindhu



- As per Savarkar, the word Hindu and Hindustan best describe the people who lived between Sindhu and Sindhu — the river Indus or Sindhu in the north and the Indian Ocean in the south. He says that while the name 'Sindhu' was given by the Aryans, and S is replaced by H in both Persian and Prakrit.
- He adds that while it is difficult to state when the first band of Aryans made the banks of the Indus their home but it is yet certain that this was long before the ancient Egyptians, and Babylonians had built their civilizations.
- Savarkar says the Aryans called themselves the Sapta Sindhus after the seven rivers "presided over by the Sindhu". As per him, the word Hapta Hindu can be found in the Avesta, the ancient collection of Zoroastrian religious texts, and the name soon spread beyond Persia.
- He then goes on to argue that the name Sindhu could be older than the Aryans, who borrowed it from the friendlier of the tribes who inhabited this land before their arrival.



The Indus river in Ladakh

Hindustan and Bharat

- Savarkar says the word Bharat came about when the "centre of gravity" shifted from Sapta Sindhu to the Gangetic delta. "The terms Aryawarta or Bramhawarta were not so suitable as to express the vast synthesis that embraced the whole continent from the Indus to the sea and aimed to weld it into a nation. Aryawarta as defined by the ancient writers was the land that lay between the Himalayas and the Vindhya.... it could not serve as a common name to a people that had welded Aryans and non-Aryans into a common race."
- Savarkar says "it is enough to know that the name - 'Bharat' had been not only the accepted but the cherished epithet by which the people of Aryawarta and Daxinapatha delighted to call their common motherland and their common cultural empire."
- However, he goes on to argue, "But this new word Bharatavarsha could not altogether suppress our cradle name Sindhus or Hindus nor could it make us forget the love we bore to that River of rivers." Foreigners, too, he says, continued to identify the land with Sindhu.
- He cites a more defined description given by Shalivahan, the grandson of King Vikramaditya. "The best country of the Aryans is known as Sindhusthan whereas the Mlecch country lies beyond the Indus."
- He then argues that while Emperor Bharat is gone, the Sindhu lives on forever.

Savarkar On Sanatan Dharma, Hindu dharma, and Hindutva

- Savarkar describes the followers of Sanatan Dharma as those who recognise the authority of Shruti, Smriti and Puranas. Shruti and Smriti both refer to Vedic literature, Shruti is first-hand knowledge, that which was heard (Vedas, Upanishads, etc.), while Smriti is that which is written down from memory (Upvedas, Tantras, etc.)
- He adds "The religion of the majority of the Hindus could be best denoted by the ancient accepted appellation, the Sanatan dharma or the Shruti-smriti-puranokta Dharma or the Vaidik Dharma; while the religion of the remaining Hindus would continue to be denoted by their respective and accepted names Sikha Dharma or Arya Dharma or Jain Dharma or Buddha Dharma. Therefore, the Vaidik or the Sanatan Dharma itself is merely a sect of Hinduism or Hindu Dharma, however overwhelming be the majority that contributes to its tenets."
- About Hindutva, he says, "Hindutva is not a word but a history. Not only the spiritual or religious history of our people as at times it is mistaken to be by being confounded with the other cognate term Hinduism, but a history in full. Hinduism is only a derivative, a fraction, a part of Hindutva."

A short history of our nation's names; from the Rig Veda to the Constitution of India



Relevance: Prelims & Mains Paper I; History & Culture

Why in news?

- The recent official invitation to a G20 dinner had the image of being hosted by "The President of Bharat" instead of the usual "President of India".
- There is speculation of an official change in the name of the country from India to Bharat, even though Article 1 of the Constitution uses the two names interchangeably: "India, that is Bharat, shall be a Union of States."
- Also, several names such as Reserve Bank of India and the Indian Railways already have Hindi variants with "Bharatiya" in them.
- In 2020, the Supreme Court had dismissed a PIL seeking to remove "India" from the Constitution and retain only Bharat in order to "ensure the citizens of this country...get over the colonial past" saying: "India is already called Bharat in the Constitution itself."



Origin of the term 'Bharat'



- The roots of "Bharat", "Bharata", or "Bharatvarsha" are traced back to Puranic literature, and to the epic Mahabharata. The Puranas describe Bharata as the land between the "sea in the south and the abode of snow in the north".
- As per a prominent social scientist, 'Bharata' refers to the "supraregional and subcontinental territory where the Brahmanical system of society prevails". Bharata is also the name of the ancient king of legend who was the ancestor of the Rig Vedic tribe of the Bharatas, and by extension, the progenitor of all peoples of the subcontinent.
- Writing in 1927, Jawaharlal Nehru alluded to the "fundamental unity of India" that has endured from "the remote past": "a unity of a common faith and culture. India was Bharata, the holy land of the Hindus, and it is not without significance that the great places of Hindu pilgrimage are situated in the four corners of India — the extreme South overlooking Ceylon, the extreme West washed by the Arabian Sea, the East facing the Bay of Bengal and the North in the Himalayas."

'India' and 'Hindustan'

- The name **Hindustan** is thought to have **derived from 'Hindu'**, the Persian cognate form of the Sanskrit '**Sindhu**' (Indus), which came into currency with the **Achaemenid Persian conquest of the Indus valley** (northwestern parts of the subcontinent) that begin in the **6th century BC** (which was the time of The Buddha in the Gangetic basin).
- The **Achaemenids** used the term to **identify the lower Indus basin**, and from around the first century of the **Christian era**, the suffix "**stan**" came to be used with the name to create "**Hindustan**".
- The **Greeks**, who had **acquired knowledge of 'Hind'** from the **Achaemenids**, transliterated the name as '**Indus**'. By the time the **Macedonian king Alexander invaded India** in the **3rd century BC**, '**India**' had come to be **identified with the region beyond the Indus**.
- By the time of the **early Mughals (16th century)**, the name '**Hindustan**' was used to describe the entire **Indo-Gangetic plain**. As per a historian, "in the mid-to-late eighteenth century, **Hindustan** often referred to the territories of the **Mughal emperor**, which comprised much of **South Asia**".
- From the **late 18th century onwards**, British maps increasingly began to use the name '**India**', and '**Hindustan**' started to **lose its association with all of South Asia**.

How did 'Bharat' and 'India' come into the Constitution?

- In his monumental '**Discovery of India**', **Nehru** referred to "**India**", "**Bharata**" and "**Hindustan**": "**Often, as I wandered from meeting to meeting, I spoke to my audiences of this India of ours, of Hindustan and of Bharata, the old Sanskrit name derived from the mythical founders of the race.**"
- But when the question of naming India in the Constitution arose, '**Hindustan**' was dropped, and **both 'Bharat' and 'India' were retained**.
- During the **Constituent Assembly debates in Sept. 1949**, the "**Name and territory of the Union**" was taken up for discussion. Right from the time the first article was read out as "**India, that is Bharat, shall be a Union of States**", a division arose among the members. **There were quite a few members who were against the use of the name 'India', which they saw as being a reminder of the colonial past.**
- However, **none of the suggestions made by them were accepted by the committee.**

Pakistan's founder Jinnah's opposition to the name 'India'



Relevance: Prelims & Mains Paper I; History & Culture

Why in news?

- Recently, Congress MP Shashi Tharoor recalled that Muhammad Ali Jinnah... objected to the name 'India' since it implied that our country (India) was the successor state to the British Raj and Pakistan a seceding state.
- Notably, since the day when opposition politicians posted images of an official invitation to a G20 dinner hosted by "The President of Bharat" instead of the usual "President of India", there has been intense debate regarding the country's name.
- Some critics of this move have sought to argue that the opposition to the word "India" is actually a Pakistani construct.



From left, Jawaharlal Nehru, Earl Mountbatten, Viceroy of India, and Muhammad Ali Jinnah

Jinnah demand for the name 'Pakistan'



- Muhammad Ali Jinnah, Pakistan's founding father, always wanted the new Muslim homeland to be called Pakistan, the "land of the pure". Even though Pakistan would be carved out of the original India, he did not want the name of the new country to have anything to do with 'India'.
- The term 'Pakistan' was coined by Choudhary Rehmat Ali in 1933, and was actually an acronym for the five northern provinces of India — Punjab (P), North-West Frontier Province or Afghan Province (A), Kashmir (K), Sindh (S) and Balochistan ('tan').
- By the time the movement for a separate Islamic state in the subcontinent picked up in the 1940s, the name became integral in Muslim League speeches and correspondence. By the time Partition became a certainty, 'Pakistan' was the name of the choice for the new Islamic-majority state.
- However, Jinnah did not want independent India to be called 'India'.
- As per a historian, Jinnah was under the impression that neither state (India or Pakistan) would want to adopt the British title of 'India'. He only discovered his mistake after Lord Mountbatten, the last British viceroy, had already acceded to Nehru's demand that his state remain 'India'. Jinnah, according to Mountbatten, was absolutely furious when he found out.

Jinnah's persistent insecurity about India, both about the new nation and its name

- In a letter he wrote to India's first Governor General Lord Mountbatten, Jinnah complained that the name 'India' is "misleading and intended to create confusion".
- Jinnah was never really happy with how the Partition panned out. Despite the Muslim League's claims, Pakistan received far less land than expected. For Jinnah, there was a very real danger of Pakistan becoming subordinate to India. His views on the term 'India' flowed from the same fears.
- Moreover, the etymological origin of the term 'India' referred to lands that, post-Partition, primarily lay on Pakistan's side of the border. For a nascent nation state that no one had even imagined even 15 years earlier, laying claim to this "history" (or at least not letting 'Hindustan' claim it) was paramount.
- Lastly, Jinnah wanted India to take the name of 'Hindustan' to make clear the religious bases for the Partition and consequently, the new nation states. But "the provisions of the Indian Independence Act did not make Pakistan an Islamic states ... nor did the Indian Independence Act of 1947 make India a Hindu Raj".
- As per a Pakistani historian, "until the bitter end the [Muslim] League continued to protest against Hindustan adopting the title 'Union of India'". This shows that Jinnah never quite abandoned his strategy of bringing about an eventual union of India on the basis of Pakistan and Hindustan.
- In Sept. 1949, when the Constituent Assembly of India began to discuss the draft Constitution of India, the name "Hindustan" was also on the table, but was quickly rejected. Article 1 of the Constitution uses "India" and "Bharat" interchangeably in its English version, and "Bharat" is used in the Hindi version.

Santiniketan gets included in the UNESCO's World Heritage List

Relevance: Prelims & Mains Paper I; History & Culture

Why in news?

- Santiniketan, a town established by Nobel laureate Rabindranath Tagore, has made it to the UNESCO's World Heritage List. It has become India's 41st World Heritage Site to join this list.
- Located in West Bengal's Birbhum district, Santiniketan, which means "abode of peace", started taking shape in 1901 and is the place where Tagore laid the foundations of Visva-Bharati University.
- Notably, attempts to get Santiniketan inscribed on the World Heritage List have been going on since 2010.
- The dossier by the Culture Ministry proposing Santiniketan's inclusion on this list points out that the "place exhibits an important interchange in human values, over a span of time or within a cultural area of world, on developments in architecture or technology, monumental arts, town planning or landscape design".



Hoysala temples included in the UNESCO heritage list



Relevance: Prelims & Mains Paper I; History & Culture

Why in news?

- Three Hoysala-era temples in Karnataka recently made it to UNESCO's World Heritage List, under the collective entry of 'Sacred Ensembles of the Hoysalas'.
- Hoysala temples are known for the rare beauty and finesse of their wall sculptures, and have been described as "art which applies to stone the technique of the ivory worker or the goldsmith".
- Built in the 12th and 13th centuries, these three temples - the Chennakeshava temple in Belur, the Hoysaleswara Temple in Halebidu, and the Keshava Temple in Somanathapura are important not just because they demonstrate their builders' superior skill, but also because they narrate the tale of the politics that shaped them.

Who were the Hoysalas?

- The Hoysalas held power in Karnataka from the 10th century to the 14th century. The dynasty began as provincial governors under the Western Chalukyas, but as the two dominant empires of the South, the Western Chalukyas and the Cholas, crumbled, the Hoysalas established themselves as rulers.
- Two of the temples that made it to the UNESCO list are located in cities that served as the capital of the Hoysalas — earlier Belur, and then Halebidu (or Dwarasamudra).

The Sacred Ensembles of these temples

- The Chennakeshava temple, dedicated to Lord Vishnu, was consecrated around 1117 AD by the mighty Hoysala king Vishnuvardhana, to mark his victories against the Cholas. It is thus also called the Vijaya Narayana temple.
- The other Vaishnava shrine, the Kesava temple, was built in Somanathapura in 1268 by Somanatha, a general of Hoysala King Narasimha III.
- The Hoysaleswara temple in Halebidu is believed to be the largest Shiva temple built by the Hoysalas, and is dated to the 12th century.



The Chennakeshava temple in Belur



The Hoysaleswara temple in Halebidu

Unique architecture

- One notable feature of Hoysala architecture is the use of soapstone, a malleable stone that is easy to carve.
- Another of its special features is the unique confluence of styles. It is an amalgamation of three distinctive styles— the mainstream Dravidian architecture as represented in the Pallava and Chola temples; the Vesara style, the variant of the Dravida style that emerged in the Chalukya and Rashtrakuta temples; and then the North Indian Nagara style.
- The temples are generally built on stellate (star-shaped) platforms, and have several structures inside the complex. The walls and pillars are covered in beautiful sculptures that have rich narrative and descriptive dimensions.
- An interesting feature of Hoysala temples is that they are 'signed' — the sculptors, and masons leave behind their names, and sometimes a few more details.
- Also, these Vaishnava and Shaivya shrines were being built at the time Jainism was prominent in the region, and thus mark a turn towards Hinduism.

DISASTER MANAGEMENT

Himachal CM requests 'national disaster' tag after heavy rains in state



Relevance: Prelims & Mains Paper III; Disaster Management

Why in news?

- Himachal Pradesh Chief Minister Sukhvinder Singh Sukhu has requested Prime Minister Narendra Modi to declare the destruction caused by heavy rains in the state a national disaster.
- States affected by natural disasters often make such requests to the Centre. Demands for special relief packages are also made.



Reasons behind this demand

- Sukhu has said that Himachal Pradesh suffered losses of Rs 10,000 crore due to rain-related incidents this monsoon. He demanded that the calamity be declared a national disaster and a special disaster package be announced.
- According to official figures, 418 people have died (265 in rain-related incidents and 153 in road accidents) since the onset of monsoon on June 24 till Sept. 9, while 39 are missing.

How are states assisted during natural disasters?



- There is no official or defined category of "national disasters". Disasters of this nature come under the 2005 Disaster Management Act, which defines a "disaster" as "a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area".
- The Act saw the creation of the National Disaster Management Authority (NDMA), to be headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers.
- Together with district-level authorities, an integrated Disaster Management setup was to be created in India.
- The Act also led to the National Disaster Response Force. It has several battalions or teams, which are responsible for on-ground relief and rescue work in several states.

What is the NDRF?

- The National Disaster Relief Fund (NDRF) is mentioned in the 2005 Disaster Management Act. Similarly, SDRFs exist for the states and are the primary funds available to state govts for responses to notified disasters. The Central Govt contributes 75% to the SDRF in general states and 90% in northeastern and Himalayan states.
- The SDRF is to be used only for meeting the expenditure for providing immediate relief to the victims of notified calamities like cyclones, droughts, earthquakes, fires, floods, tsunamis, hailstorms, landslides, avalanches, cloud bursts, pest attacks and frost/cold waves.
- The state govt is primarily responsible for undertaking rescue, relief and rehabilitation measures in the event of a disaster. But these can be supplemented with Central assistance.

What is a severe calamity?

- This classification is based on a specific procedure, where the state govt needs to submit a memorandum indicating the sector-wise damage caused by a disaster and its requirement of funds.
- Afterwards, an inter-ministerial central team is constituted and it conducts an on-the-spot assessment of damage and requirement of funds for relief operations.
- After this, specific committees examine these assessments and submit their reports. A High-Level Committee must approve the quantum of immediate relief to be released from the NDRF. The Disaster Management Division of the Ministry of Home Affairs will then provide support and monitor the utilisation of funds.
- A calamity is declared to be of "rare severity"/"severe nature" based on undefined criteria, but factors such as the intensity and magnitude of the calamity, level of assistance needed, etc. are looked at.

(more ahead)

Cont'd

- A Calamity Relief Fund (CRF) is set up, with the corpus shared 3:1 between Centre and state.
- When resources in the CRF are inadequate, additional assistance is considered from the National Calamity Contingency Fund (NCCF), funded 100% by the Centre. Relief in repayment of loans or for grant of fresh loans to the persons affected on concessional terms, too, are considered once a calamity is declared "severe".
- Otherwise, the funds for the NDRF and SDRFs, for preparedness, mitigation and reconstruction, are allocated by the Govt as a part of budgetary allocations. Funds for immediate relief are recommended by the Finance Commission – a constitutional body that recommends the distribution of financial resources among the states and the Centre – for a five-year period.
- The 15th Finance Commission (for 2021-22 to 2025-26) adopted a new methodology for state-wise allocations, based on factors like past expenditure, risk exposure (area and population) hazard and vulnerability of states.

INTERNAL SECURITY

Govt brings changes to the process for the sale of SIM cards

Relevance: Prelims & Mains Paper III; Internal Security

Why in news?

- In a bid to further tackle the menace of cybercrimes and financial fraud, the Govt. has introduced two reforms. These entail a revision of norms for bulk procurement of SIM cards and registering the final point of sale (PoS) by the licensees (or providers).
- The reforms are meant to strengthen the citizen-centric portal Sanchar Saathi that was launched in May this year with the same objective.

What is Sanchar Saathi?

- Broadly, the citizen-centric portal allows citizens to check the connections registered against their names, block mobile phones which are stolen or lost, report fraudulent or unrequired connections and verify the genuineness of a device (before a purchase) using the IMEI (International Mobile Equipment Identity).
- Sanchar Saathi has, till date, analysed 114 crore active mobile connections. Of these, 66 lakh connections were flagged as suspicious, and 52 lakh connections were disconnected because they failed re-verification.
- Other than this, 66,000 WhatsApp accounts have been blocked and eight lakh bank/wallet accounts were frozen. Furthermore, more than 300 FIRs have been filed against more than 1,700 dealers.

The reform on PoS

- From now on, it will be mandatory for franchisee, agents and distributors of SIM cards — all PoS — to be registered with the licensees or the telecom network operator.
- The onus would be on the operator to carry out an “indisputable” verification of the PoS. Importantly, police verification (of the dealer) is mandatory. Existing SIM card providers have been given 12 months to comply with the registration requirements.
- If the PoS is found to be involved in any illegal activity, the agreement would be terminated with the entity being blacklisted for three years. It would also draw a penalty of ₹10 lakh.

The reform on bulk SIM cards

- Broadly, the latest provisions would replace the system of ‘bulk procurement’ of SIM cards (by businesses, corporates or those meant for specific events) with a system of entailing ‘business’ connections — sizeable procurement by a registered business entity or enterprise.
- As per the govt, 20% of bulk-procured SIMs were misused. In the guise of bulk connections, a lot of SIMs would be procured and then they would make automated calls using a SIM-box.
- Also, a certain number of SIMs from the bulk procurement were being used to make a certain number of calls, destroying them and then using another batch.
- The latest reforms aim to address these issues. The new norms maintain that though businesses can procure any number of connections, it would be subject to completing KYC requirements for all end-users. In other words, the final user— the executive who would be holding the connection — would have to undergo the KYC procedure.
- In order to prevent the misuse of printed Aadhaar, the provisions mandate that demographic details would be required by scanning the QR code of the printed Aadhaar. Subscribers would also have to undergo the entire KYC procedure for replacing their SIM; for a period of 24 hours, all outgoing and incoming SMS facilities would be barred.

GEOGRAPHY

India experiences its driest-ever August

Relevance: Prelims & Mains Paper I; Geography



Why in news?

- India was fortunate in July. Despite an emerging El Nino, the country as a whole received 13% more rainfall than expected.
- In August, however, the adverse impacts of El Nino on the monsoon rainfall became evident. This August was the driest ever.

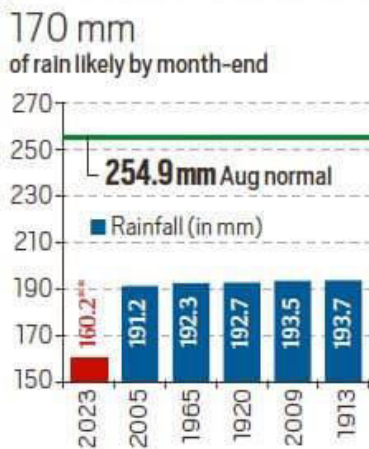


Driest August

- August is the second rainiest month in India, after July. In a normal year, August sees about 255 mm rainfall over the country, accounting for about 22% of the annual rainfall of 1,160 mm. July, the rainiest month, accounts for a little over 24%.
- But this August has gone down as the driest since 1901, from when rainfall records are available. By 29th of August, the country as a whole had received only 160 mm of rainfall during that month.
- That means a deficit of about 33% for the month. Never has the country received less than 190 mm of rainfall in August.
- States like Gujarat and Kerala had a deficit of nearly 90% in August. Karnataka, Telangana and Andhra Pradesh also had more than 50% deficiency. Tamil Nadu, which receives a bulk of its rainfall during the winter months, had a shortfall of about 23%.

AFTER GOOD RAINFALL IN JULY, EL NINO EFFECT ON MONSOON

Five driest August months so far



** Till Tuesday morning

Driest states this August

	Rainfall in August	Period Normal (1-28 August)	August Deficiency	Seasonal Deficiency
GUJARAT	20.9 mm	206.1 mm	89.86%	-16.71%
KERALA	46.4 mm	421.5 mm	88.99%	47.84%
RAJASTHAN	30.9 mm	148.1 mm	79.14%	-14.18%
KARNATAKA	52.7 mm	206.8 mm	74.52%	20.70%
TELANGANA	79 mm	211.9 mm	62.72%	-11.34%
PUNJAB	55 mm	141.2 mm	61.05%	1.26%
GOA	280.1 mm	689.4 mm	59.37%	-3.96%
HARYANA	58.3 mm	140.8 mm	58.59%	-9.14%
MAHARASHTRA	113.7 mm	263.2 mm	56.80%	9.68%
DELHI	87 mm	180.5 mm	51.80%	-4.37%

* From June 1 till date; negative (minus) deficiency means rainfall more than normal



El Nino impact

- El Nino refers to the unusual warming of the equatorial Pacific Ocean off the coast of northwest South America, which influences weather events across the world.
- Over India, it has the effect of suppressing the monsoon rainfall. A similar phenomenon in the Indian Ocean, called the Indian Ocean Dipole (IOD), was expected to turn favourable for the monsoon rainfall this year, but did not have much impact.
- The only regions that received good rainfall in August were east and northeast India. Incidentally, these parts had remained significantly dry in June and July, showing a deficit of 15% and 32% in those respective months.
- August rainfall brought welcome relief in this region, but even though the monthly rainfall in most of these states has been more than normal, it has not been sufficient to wipe off the seasonal deficit.
- Beyond El Nino, there are some other systems that can also bring about short spells of rain. Many of these were favourable during July, but unfortunately, none in August.
- As per experts, there are chances of a revival of the monsoon in the first or second week of September.

Dropping reservoir levels

- Since the four-month monsoon season brings about 75% of India's annual rainfall, the storage of water in reservoirs for use during the rest of the year is crucial.
- As of now, water levels in the major reservoirs of the country are not bad. The combined storage in 146 major reservoirs of the country, as per data till last week, was about 94% of the normal. This is most likely to see a drop later on.
- But in several states, reservoirs are already running at very low levels. In Kerala and Tamil Nadu, reservoirs are holding only 50% of the water that they normally have during this time of the year, while in Bihar, reservoirs levels are at only 12% of the normal. States like Uttar Pradesh, Jharkhand, Odisha, Andhra Pradesh and Telangana are also not doing very well. A dry September can worsen this situation.
- There are concerns for the winter crops as well. Even the standing kharif crops, which benefited from plenty of water during the sowing time in July, are feeling the stress now.

September rains bring major relief to Indian farmers

Relevance: Prelims & Mains Paper I; Geography

Why in news?

- The southwest monsoon's revival in September has come as a major relief for Indian farmers.
- Following an extended dry spell in August, these



Irregular rain!

- The monsoon has been erratic, arriving a week late in June that recorded overall 10.1% rainfall deficiency. But the 12.6% above-normal rain in July helped spur plantings of most kharif crops.
- What followed, however, was the driest ever August since 1901. With an all-India 36.2% deficit, vis-à-vis the historical average precipitation for the month, the crops that were already sown experienced severe moisture stress.
- July-August are usually the peak monsoon rainfall months, not only meeting the kharif crop's requirements, but also filling up ponds and reservoirs and recharging groundwater tables.
- This time, it was the other way round: Farmers had to rely on releases from dams by irrigation departments and draw down underground water reserves to salvage their crops.
- Data shows water levels in 150 major reservoirs to have dipped to 111.7 billion cubic meters (BCM) as on Sept. 6, 25.9% down from a year ago and 13.8% below the last 10 years' average for this date.
- The 18.7% surplus rainfall in September so far (chart on the next slide) has raised the total reservoir water levels to 126.4 BCM. Although 19.5% below last year's and 7.7% lower than the 10 years' average for this time, it's an improvement from the worst.

RAINFALL CONCERN OVER RABI CROPS TOO

ALL-INDIA RAINFALL: ACTUAL VS. LONG PERIOD AVERAGE



*September 1-24; **June 1-September 24; Source: India Meteorology Department

STOCKS AT 6-YR LOWS (lakh tonnes)

	Cereals*	Sugar**
2017	482.08	39.41
2018	611.27	104.71
2019	716.38	143.33
2020	773.61	104.78
2021	904.13	83.98
2022	601.12	71.23
2023	600.97	58.23#

*Rice and wheat in govt godowns as on September 1; **Stocks with mills as on Sept 30; #Projected. Source: Food Corporation of India and National Federation of Cooperative Sugar Factories Ltd

Benign effects

- The September showers have been most beneficial for oilseeds, especially soyabean and groundnut, due for harvesting from this month-end.
- A reasonably good kharif harvest, along with record imports, should allay any inflation fears in vegetable oils. India's edible oil imports are set to top 16.5 million tonnes (mt) in the year ended Oct 2023, surpassing the previous all-time-high of 15.1 mt in 2016-17. Landed prices of imported crude palm oil have fallen to about \$860 per tonne (from a July average of \$945), and similarly to \$990 (from \$1,085) for soyabean and \$885 (\$1,000) for sunflower.
- Inflationary pressures have also eased in vegetables, whose consumer price index had jumped 37.4% year-on-year in July and 26.1% in August. That should come down sharply this month.
- The all-India modal (most-quoted) retail price of tomato is currently at Rs 20/kg, as against Rs 120 two months ago, and flat at Rs 20 for potato. Only onion has shown increase, from Rs 25 to Rs 30/kg. While there are concerns over the kharif onion crop – plantings have been lower and harvesting also likely to be delayed by a month from November – the Centre's imposition of a 40% export duty has put a lid on prices for now.
- Another commodity where the situation has turned comfortable is milk. In Feb-March, Maharashtra dairies were paying up to Rs 38 for a litre of cow milk, even as ex-factory prices of butter and skimmed milk powder hit Rs 430-435 and Rs 315-320 per kg respectively. Those prices have since crashed to Rs 34, Rs 350-360 and Rs 250-260 levels. A further supply boost can be expected in the coming months.

Supply worries

- These are mainly in three commodities: Cereals, sugar and pulses. The accompanying table (on Slide 4) shows stocks of both cereals (rice and wheat in govt godowns) and sugar (with mills) at six-year-lows.
- Given that over a third of India's paddy area is un-irrigated, and rainfall has been deficient in the whole of eastern UP, Bihar, Jharkhand and Gangetic West Bengal, a drop in kharif rice output cannot be ruled out this year.
- Moreover, the crop in large areas of Punjab and Haryana suffered inundation due to excess rain and water released from dams. Farmers there had to then re-transplant short-duration paddy varieties, including of basmati, yielding less than those planted earlier in June.
- In sugar, the projected 5.8 mt stocks on Sept. 30 should suffice for 2.5 months of domestic consumption. That will cover the peak Dussehra-Diwali festival season. To ensure a fine balance in supplies, the Centre has banned export of sugar and much of rice.
- As regards pulses, there's a clear shortfall – reflected in arhar (pigeon-pea), moong (green gram) and chana (chickpea) wholesaling at Rs 12,000, Rs 9,000 and Rs 6,000 per quintal respectively, above their corresponding minimum support prices of Rs 7,000, Rs 8,558 and Rs 5,335.

Road ahead

- The real challenge may be in the upcoming rabi (winter-spring) season, where the water for crops – from wheat, mustard and chana to potato, onion, garlic and jeera (cumin) – comes from underground aquifers and dams. The monsoon rain hasn't been enough to fill up reservoirs or replenish groundwater tables.
- On top of that is El Niño. As per estimates, there is a 73% chance of average sea surface temperatures in the east-central equatorial Pacific Ocean staying more than 1.5 degrees Celsius above normal during Oct-Dec and 78% probability of exceeding 1 degree in Jan.-March 2024. That's well above the 0.5 degrees El Niño threshold.
- El Niño persisting through March 2024 could translate into subpar rain during the northeast monsoon (Oct-Dec) and winter (Jan-Feb) seasons. For farmers with already depleted ponds and groundwater reserves, it might make cultivation of rabi crops that much more difficult. That can also keep food inflation elevated till the national elections.

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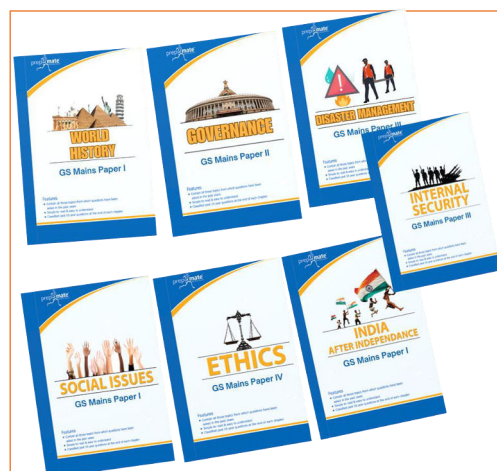


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Quiz



Q1. Which of the following are the advantages of placing Aditya in L1 over other Lagrange points?

1. L1 is the nearest point to earth.
2. L1 enables continuous view of the Sun.
3. ISRO has experience of launching solar missions in L1.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q2. Consider the following statements about Y chromosome:

1. It is smaller as compared to other chromosomes.
2. It bears few genes as compared to other chromosomes.
3. It has a lot of DNA sequences that don't seem to contribute to traits.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q3. Which of the following statements is correct regarding foreign trade of rice from India?

- (a) India does not trade rice with other countries.
- (b) India is a net importer of rice.
- (c) India is the largest exporter of rice.
- (d) India is the second largest exporter of rice.

Q4. The Lok Sabha has been dissolved for 16 times since independence. It has been dissolved earlier than its tenure of 5 years in the years

- (a) 1971, 1980, 1984, 1991 only
- (b) 1971, 1980, 1984, 1991, 1998 only
- (c) 1971, 1980, 1984, 1991, 1998, 1999 only
- (d) 1971, 1980, 1984, 1991, 1998, 1999 and 2004

Q5. 'Pirola' has been recently in news. It is

- (a) an operating system built in India
- (b) a malware which affected large number of devices globally
- (c) a military weapon capable of launching missile from mobile platform
- (d) a new covid variant

Q6. G-20 was initially founded in 1999 as an informal forum for annual meeting of

- (a) Finance Ministers and Central Bank Governors
- (b) External affairs ministers
- (c) Heads of States and Heads of governments
- (d) National Security advisers

Q7. What is the meaning of Sherpa in the context of G-20?

- (a) Sherpa is used for Central bank governors.
- (b) Sherpa is used for Civil society representatives.
- (c) Sherpa is used for finance ministers.
- (d) Sherpa is used for representatives of Heads of State.

Q8. The word 'Sindhu' has been used in the past to refer to

- (a) Indus river only
- (b) Indian ocean only
- (c) Both Indus river and Indian Ocean
- (d) Neither Indus river and Indian ocean

Q9. Which of the following names have been used for our beloved country in the Constitution?

- (a) India only
- (b) India and Bharat only
- (c) India and Hindustan only
- (d) India, Bharat and Hindustan

Q10. Both the fixed interest rate loan and floating interest rate loan are initially offered at the same rate of interest. In the time of falling prices, the borrowers of the loan should go far

- (a) Floating interest rate loan because it will reduce the loan repayment.
- (b) Fixed interest rate loan because it will reduce the loan repayment.
- (c) Any type of loan as Loan repayment would be unaffected.
- (d) Dividing the total loan into both types to minimise the risk.

Q11. How many of the following factors reduce liquidity in the economy?

1. Sale of dollars by RBI
2. Increase in GST payout
3. Increase in Cash Reserve Ratio

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q12. The recent G-20 declaration, held in New Delhi, consisted of

- (a) A preamble, 10 chapters, and a conclusion
- (b) A preamble, 11 chapters, and a conclusion
- (c) A preamble, 12 chapters, and a conclusion
- (d) A preamble, 14 chapters, and a conclusion

Q13. Which of the following statements is correct about Heat Index?

(a) It is the actual maximum temperature at 12 noon during any particular day.

- (b) It is the temperature during the day when relative humidity is maximum.
- (c) It is the average temperature of the day when the Sun is visible in the sky.
- (d) It is the apparent temperature as is experienced by humans.

Q14. Which of the following statements is correct about India-Saudi Arabia Strategic Partnership Council?

- (a) India is the first country with which Saudi Arabia has established such Council.
- (b) The India-Saudi Arabia Council commenced in 2023.
- (c) The first summit level meeting of the Council was held in 2023.
- (d) The Council will focus on issues of political interest only.

Q15. Which of the following G-20 countries, so far, have not agreed to join Global Biofuels Alliance?

1. China
2. Saudi Arabia
3. Russia

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q16. Which of the following statements about International Organisation of Legal Metrology (OIML) is incorrect?

- (a) OIML is headquartered in Paris.
- (b) India has been recently authorised to issue OIML certificates.
- (c) India is the founding member of OIML.
- (d) India is signatory to metric convention concluded under OIML.



Q17. C295 aircraft will be manufactured in India by

- (a) Tatas
- (b) Adani
- (c) Reliance
- (d) Hindustan Aeronautics

Q18. The West Coast Mega refinery project which is proposed to be established in the state of Maharashtra is in collaboration with which of the following nations?

- (a) USA and Israel
- (b) Uk and Germany
- (c) Saudi Arabia and UAE
- (d) Iran and Turkiye

Q19. The recently launched PM Vishwakarma scheme seeks to provide assistance to

- (a) Factory workers
- (b) Self employed people
- (c) Workers engaged in traditional crafts
- (d) Tax payee workers

Q20. Which of the following is the correct statement about 'Bima Sugam'?

- (a) It is the proposed largest public sector insurance company
- (b) It is the plan to launch single insurance for all needs
- (c) It is the government scheme to provide comprehensive insurance to unorganised sector
- (d) It is the proposed platform to provide insurance services

Q21. Which of the following statements about Indo-Canadian relations is correct?

- (a) Canada accounts for more than 1% of India's FDI.
- (b) Canada is home to more than 5% of overseas Indians.
- (c) Bilateral trade with Canada is more than \$1 billion.

(d) Canada is the largest source of tourists to India.

Q22. Which of the following is not part of Personality rights of a celebrity?

- (a) Image and Signature
- (b) Voice and body language
- (c) Pose and mannerism
- (d) Property and wealth

Q23. How many of the following pairs regarding Hoysala temples and their location are correctly matched?

1. Chennakeshava temple - Halebidu
2. Kesava temple - Belur
3. Hoysaleswara temple - Somanathapura

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q24. Shanti Swarup Bhatnagar (SSB) awards are conferred to people who have achievements in the field of

- (a) Arts
- (b) Sports
- (c) Science
- (d) Public Administration

Answer Key

1. (b)	2. (c)	3. (c)	4. (d)	5. (d)
6. (a)	7. (d)	8. (c)	9. (b)	10. (a)
11. (c)	12. (a)	13. (d)	14. (c)	15. (c)
16. (c)	17. (a)	18. (c)	19. (c)	20. (d)
21. (b)	22. (d)	23. (d)	24. (c)	

Explanations



1. (b) Statement 3 is incorrect. ISRO is first time launching a solar mission to any of the Lagrange points. Statements 1 and 2 are correct.
2. (c) All the three statements are correct. Thus, option (c) is the answer.
3. (c) India is the second largest producer, but largest exporter of rice.
4. (d) The Lok Sabha has been dissolved earlier than its tenure of 5 years in the years 1971, 1980, 1984, 1991, 1998, 1999 and 2004.
5. (d) Pirola is a new Covid variant.
6. (a) G-20 was initially founded in 1999 as an informal forum for annual meeting of Finance Ministers and Central Bank Governors. The first summit of G-20 was held in 2008.
7. (d) In G-20, Sherpas are representatives of Heads of States.
8. (c) Both Indus river and Indian Ocean are called Sindhu respectively.
9. (b) Article 1 of the Constitution says India, i.e. Bharat, is a Union of States.
10. (a) In time of falling prices, the interest rates also tend to reduce. Thus, the borrowers of the loan should go for Floating interest rate loan because it will reduce the loan repayment.
11. (c) All the above factors reduce availability of funds with the people and thus, reduce liquidity in the economy.
12. (a) The chapters in G-20 declaration based on different themes were numbered A to J, a total of 10 chapters.
13. (d) Heat index, also known as apparent temperature, is a measure of how the temperature feels to humans.
14. (c) The India-Saudi Arabia Strategic Partnership Council was set up in 2019, making India the fourth country with which Saudi Arabia formed such a partnership, after the UK, France, and China. The first summit level meeting of the Council was held in 2023.
15. (c) China and oil producers Saudi Arabia and Russia have decided not to be part of the Global Biofuels alliance.
16. (c) Option c is incorrect statement. OIML was established in 1955 and India became its member in 1956.
17. (a) India is procuring 56 C295s. The first 16 C295s will be assembled in Seville, Spain. The remaining 40 will be manufactured and assembled – in partnership with Tata Advanced Systems Limited (TASL) – at a Final Assembly Line (FAL) in Gujarat's Vadodara.
18. (c) The ambitious project to build the mega oil refinery and petrochemicals facility in Maharashtra's Konkan belt has proposed participation from Saudi Arabia and the United Arab Emirates.

Explanations



19. (c) PM Vishwakarma scheme launched in New Delhi on the occasion of Vishwakarma Jayanti seeks to provide govt support to workers engaged in traditional crafts and skills.
20. (d) IRDAI claims that the proposed Bima Sugam will be the largest online market for insurance products and services which has not been practiced anywhere in the world.
21. (b) Canada is home to 5.26% of overseas Indians.
22. (d) The name, voice, signature, images or any other feature easily identified by the public are markers of a celebrity's personality and are referred loosely as "personality rights." These could include a pose, a mannerism or any aspect of their personality.
23. (d) The Chennakeshava temple is in Belur, the Kesava temple is in Somanathapura and the Hoysaleswara temple is in Halebidu.
23. (c) The SSB Prize was instituted in memory of the first Director General of the Council of Scientific and Industrial Research (CSIR) – Dr. Shanti Swarup Bhatnagar.