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- Pink bollworm (PBW) Attack
- Legionella bacteria
- Kanaklata Barua & Matangini Hazra
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- Sulina Channel

SPECIALS

n Revamp of colonial-era laws

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- Disclaimer -

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.



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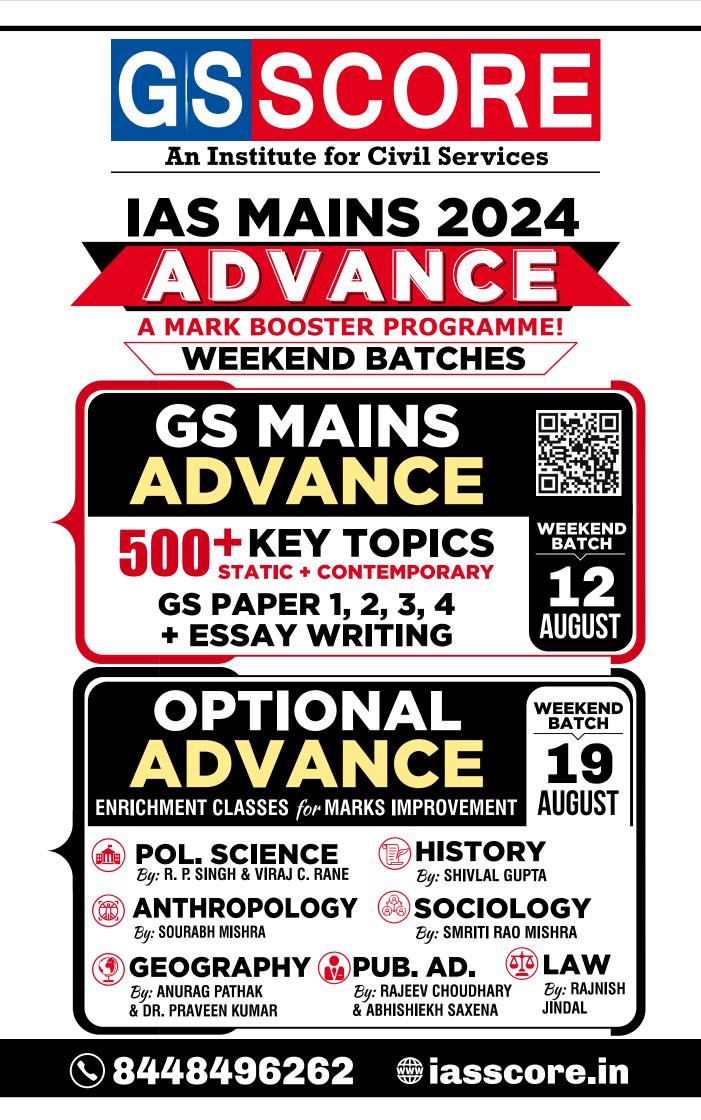
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EAST CONTAINER TERMINAL (ECT) PROJECT

Context: Around two years after Sri Lanka cancelled a joint India-Japan MoU for the East Container Terminal (ECT) project in Colombo, the three countries are now studying ways of restarting trilateral cooperation.

Background:

- * In 2019, India and Sri Lanka signed a memorandum of understanding (MoU) for "co-operation on economic projects".
- The development and operation of the **container** terminal was one of the projects in the MoU including:
 - a Container Terminal in Colombo Port as a Joint ≻ Venture
 - Indian investments considering that majority of transshipment in Colombo Port is related to India
- The MoU did not mention the Eastern Container Terminal. However, India and Sri Lanka had already been in discussion for its development and operation.
- * However, last year Sri Lanka withdrew from the agreement.
- * But again all three countries are planning for the revival of ECT project.

About Eastern Container Terminal port:

The ECT is located some 3 km away from the Chinabacked international financial city, known popularly as "port city", being built on reclaimed land on Colombo's sea front.

Why Japan is joining the path with India and Sri Lanka?

- ✤ There are two reasons that India had roped Japan into the projects:
 - Japan was also the biggest donor to Sri Lanka through years the of conflict.
 - The Geoffrey ► **Bawa-built** Sri Lankan parliament, which came up at the height of the

Key Projects:

- The East Container Terminal (ECT)
- An LNG Terminal/ **Floating Storage** Regasification Unit (FSRU) in Kerawalapitiya/ **Colombo** with a piped gas distribution system along with retail outlets for CNG etc.

conflict, was funded by Japan. It continues to give Sri Lanka substantial financial support even now.

- However, the old relationship between Sri Lanka and Japan has undergone changes when China's footprint over Colombo has grown.
- * Late in 2020, the Rajapaksa government unilaterally cancelled a Japanese project for a light rail transit (LRT) project in Colombo.
- * India and Japan share a vision of a Free Open and Inclusive Indo-Pacific (FOIIP), which is of relevance to all countries in the region including Sri Lanka.



What are the terms of the agreement?

- The Sri Lanka Ports Authority (SLPA) would have 100% ownership of the ECT.
- The Terminal Operations Company (TOC) conducting all ECT operations was to be jointly owned:
 - Sri Lanka retaining a 51% stake
 - ► the joint venture partners 49%
- A 40-year loan at an interest rate of 0.1% from Japan was expected to fund the development of the ECT.
- The envisaged Japanese loan carries one of the best 胀 loan terms Sri Lanka has obtained.
- The 51% stake is also one of the best in SLPA joint 濲 ownership endeavors.

How this project can help India and Japan?

- * Alternative against West Terminal: India had been offered the Western Container Terminal earlier, but had refused.
 - The ECT is already operational, while the WCT has to be built from scratch.
- 嶶 Accessibility in Indian Ocean: For India, the ECT deal was important as 60%-70% of transhipment that takes place through it is India-linked.

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- ▶ The ECT is also considered more strategic than any other in Colombo Port.
- * Proximity with Chinese developed port: It is located next to the Colombo International Container Terminal (CICT) project, a joint venture between China Merchants Port Holdings Company Ltd. and SLPA.

CENTRE MOVES NEW BILL ON APPOINTMENT OF ELECTION **COMMISSIONERS (ECS)**

Context: The government recently tabled the Chief Election Commissioner and Other Election Commissioners Bill. 2023.

Key-highlights of the Bill:

- * Selection Panel: The Bill seeks to establish a committee for selecting members of the Election Commission of India (ECI).
 - **Prime Minister**
 - Union Cabinet Minister to be nominated by the ► **Prime Minister**
 - Leader of Opposition (LoP) in the Lok Sabha. Though the LoP has not been recognised as such, the leader of the single largest opposition party shall be deemed to be the LoP.
- * Current Procedure: Currently, the Law Minister suggests a pool of suitable candidates to the Prime Minister for consideration.
 - The **President** makes the appointment on the advice of the PM.
- *** Other Key Contours:**
 - The Bill proposes to not include the judiciary from the Election Commission selection panel.
 - Persons holding or have held posts equivalent to the rank of secretary to the central government will be eligible to be appointed.
 - The salary, allowances and other service conditions shall be the same as that of a Cabinet Secretary.
- * Previously, as per the 1991 act, their salary was equal to that of a judge of the Supreme Court.
- * As per the Bill, a Search Committee headed by the Cabinet Secretary and comprising two other members, not below the rank of Secretary to the government, having knowledge and experience in matters relating to elections, shall prepare a panel of five persons who can be considered for appointment.
- Then, as per the Bill, a Selection Committee consisting of the Prime Minister, the Leader of

Opposition in the Lok Sabha, and a Union Cabinet Minister to be nominated by the Prime Minister will appoint the CEC and other ECs.

* Rationale behind the Bill: The Statement of Objects & Reasons states that the Election Commission Act 1991 do not contain provisions regarding the qualifications, search committee for preparing panel of persons for consideration and recommendation.

Present structure to appoint CEC and ECs:

- The Election Commission of India (ECI) is a threemember body, comprising a CEC and 2 ECs.
- Under Article 3 24 (2), the President appoints the CEC and other ECs.
- The President makes the appointment on the advice 濲 of the Union Council of Ministers headed by the Prime Minister
- * The Constitution does not prescribe any qualifications, academic or otherwise, for appointment to these offices.
- **∗** Tenure:
 - The tenure of office and the conditions of service of all the commissioners is determined by the President.
 - > The tenure of commissioners is 6 years or up to the age of 65, whichever is earlier.
- The CEC and the two other ECs have the same powers and emoluments, including salaries, which are the same as a Supreme Court judge.
- * All three commissioners have the same right of taking a decision. In case of a difference of opinion amongst the three members, the matter is decided by the Commission by a majority.

Process of removal:

- Article 324 of the Constitution of India mentions the provisions to safeguard and ensure the independent and impartial functioning of the Election Commission.
- The CEC is provided with security of tenure. He • cannot be removed from his office except in the same manner and on the same grounds as a judge of the Supreme Court.
- Any other election commissioner or a regional commissioner cannot be removed from office except on the recommendation of the CEC.

Supreme Courts' Judgment:

* On March 2, a five-judge bench of the Supreme Court directed for the formation of an independent panel which will advise on appointments of ECs, including the CEC.

- * As per the apex court, the panel would comprise:
 - ► Prime Minister of India
 - Leader of Opposition in Lok Sabha or the leader of the largest opposition party
 - ► Chief Justice of India
- * The Supreme Court in its order quoted the Law Commission Report 2015 that highlighted that the "Commission should be completely insulated from political pressure or executive interference to maintain the purity of elections, inherent in a democratic process".
- The Supreme Court order highlighted that the guidelines shall be in effect until the Parliament makes a law in consonance with Article 324(2) of the **Constitution**.

What does Article 324(2) of the Constitution cover?

- * It provides for the Election Commission of India. Clause 2 states that "the appointment of the CEC and other ECs shall, subject to the provisions of any law made in that behalf by Parliament, be made by the President".
- ✤ A law that was never put in place.

Why did the Supreme Court step in?

- * A clutch of writ petitions filed under Article 32 of the Constitution sought among other things, a law for ensuring a fair, just and transparent process of selection by constituting a neutral and independent collegium/ selection committee.
- ✤ The petitioners highlighted:
 - > Appointment done solely by the Executive, practice incompatible with Article 324(2)
 - No law to regulate appointment of Election Commissioners
 - > There has been inaction by the government in not making appropriate law
 - > Financial independence not enough to ensure overall independence

Debate around appointment of CEC and ECs:

* Article 324(2) reads that "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."

- * The Parliament has the power to nullify the effect of a Court ruling by addressing the concerns flagged in the judgment.
- * In this case, the arrangement prescribed by the Supreme Court was specifically because the Court noted that there was a "legislative vacuum." Filling that vacuum is well within the purview of the Parliament.
- * However, the idea of an independent body that conducts elections permeates through the judgement.
- * The Court repeatedly stated **that to be the objective** of the framers of the Constitution.
- The composition of the Selection Committee in the * Bill raises guestions on whether the process is now independent or still rigged in favour of the Executive.



Context: The Department of Space (DoS) has told the Parliamentary Committee of Science and Technology that the Navigation with Indian Constellation or (NavIC) is going to be integrated into Aadhaar enrolment devices.

About the merger:

- * Need: Currently the Aadhaar enrolment kits that are used to collect and verify personal details are linked to Global Positioning system (GPS).
- The DoS has conducted successful field trials and is providing technical expertise for the finalisation of procurement specifications for the devices.
- * Overall, the integration of NavIC into Aadhaar enrolment devices will enhance navigation accuracy and provide better disaster management capabilities.



* Significance:

> NavIC's integration will enhance the accuracy and reliability of these devices.



Navigation with Indian Constellation or (NavIC):

- NavIC or the Indian Regional Navigation Satellite System (IRNSS) is designed with a constellation of 7 satellites and a network of ground stations operating 24×7.
- There are a total of eight satellites however only seven remain active.
- Three satellites in geostationary orbit and four satellites in geosynchronous orbit.
- The constellations' first satellite (IRNSS-1A) was launched on 1st July 2013 and the eighth satellite IRNSS-1I was launched in April 2018.
- It is fully under the control of the Government of India

Aadhaar authentication process:

- * The Unique Identification Authority of India (UIDAI) has been created, with the mandate of providing a Unique Identity (Aadhaar) to all Indian residents.
- * The UIDAI provides online authentication using demographic and biometric data.
- * Aadhaar authentication is the process involves Aadhaar Number, along with other attributes, including biometrics, is submitted online to the Aadhaar system for its verification on the basis of information or data or

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SEVEN SATELLITES

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at 29 degrees to

documents available with it.

✤ During authentication the transaction, the resident's record is first selected using the Aadhaar Number and then demographic/biometric the inputs are matched against the stored data which was provided by the resident during enrolment/update process.

How NavIC will ensure data protection?

- * NavIC offers two services:
 - Standard Position Service (SPS) for civilian users
 - Restricted Service (RS) for strategic users
- * These two services are provided in both L5 (1176.45 MHz) and S band (2498.028 MHz).
- * NavIC coverage area includes India and a region up to 1,500 km beyond the Indian boundary.
- * Newer satellites will have an additional band called L1 that will be compatible with civilian use.



Present NavIC uses:

- * The National Disaster Management Agency (NDMA) was already utilising NavIC as an alert dissemination system for major natural disasters like landslips, earthquakes, floods, and avalanches.
- The Indian National Centre for Ocean Information System (INCOIS) relies on NavIC to broadcast cyclones, high waves, and tsunamis alert messages to fishermen venturing into the deep sea.

Organizations working with NavIC data:

* NavIC standards were set by the Bureau of Indian Standards (BIS), Telecom Standards Development Society, India (TSDSI), Telecom Engineering Centre (TEC), Third Generation Partnership Project (3GPP), and Radio Technical Commission for Maritime Services (RTCM), International Electrotechnical Committee (IEC), and International Standards Organisation (ISO).

Concerns with GPS or other global systems:

- * Threat to data security and sovereignty: System like GPS and GLONASS are operated by defence agencies of the respective nations.
- * Breach of personal information: It is possible that the civilian service can be degraded or denied.

IRNSS

Indian Regional Navigation Satellite System

IRNSS (NavLC) is designed to provide accurate real-time positioning and timing services to users in India as well as region extending up to 1,500 km from its boundary

IT WILL PROVIDE TWO TYPES OF SERVICES

1 Standard positioning service| meant for all users **3** in geostationary earth orbit (GEO)

2 Restricted service | Encropted service provided only to authorised useres (military and security agencies)

Applications of IRNSS are:

Terrestrial, aerial and marine navigation; disaster management; vechicle tracking and flet mangement; precise timing mapping and geodetic data capature; terrestrial navigation aid for hikers and travellers; visual and voice navigation for drivers

While American GSP has 24 satellites in orbit, the number of sats visible to ground receiver is limited. In **IRNSS, four satellites** are always in geosnchronous orbits, hence always visible to a receiver in a region 1500 km around India



Navigation Systems Around The World					
Navigation Systems	Country	Operator	Туре	Coverage	
Global Positioning System (GPS)	United States	Air Force Space Command (AFSPC)	Military, civilian	Global	
GLONASS	Russia	Russian Aerospace Defense Forces,VKO	Military	Global	
BeiDou Navigation Satellite System (BDS)	China	China National Space Administration (CNSA)	Military, commercial	Global Operational (regionally)	
Indian Regional Navigation Satellite System, IRNSS (Operational by 2016)	India	Indian Space Research Organisation (ISRO)	Military, civilian	Regional	
Galileo (In development)	European Union	GSA, ESA	Civilian, commercial	Global	
Quasi-Zenith Satellite System (QZSS) (In development)	Japan	Japan Aerospace eXploration Agency (JAXA)	Civilian	Regional	

Neutration Customs Assund The World



IN TB DETECTION, INDIA FAR **FROM MEETING THE 2025** GOAL

Context: Three years after the launch of the revised National Strategic Plan 2020-2025 to end TB, India is nowhere near meeting this target.

Status of TB in India:

- * India's TB incidence rate stands at 196 per 1,00,000 population, instead of the 210 estimated by the WHO, and the estimated deaths from the communicable disease stand at 3.20 lakh, instead of the 4.94 lakh that was projected in 2021.
- * However, due to factors such as poverty, uneven healthcare access, stigma and low health-seeking behaviour, TB remains a significant problem in the country, with India contributing more than 20% of the global infection burden.

- Tribal communities in India are particularly affected, accounting for 10.4% of all TB cases.
- * The Health Ministry noted that as per this data, the global TB reduction numbers stand at 11% while the reduction in TB cases in India is 18%.

About TB:

- TB is caused by a bacterium called Mycobacterium • tuberculosis, belonging to the Mycobacteriaceae family consisting of about 200 members.
- In humans, TB most commonly affects the lungs (pulmonary TB), but it can also affect other organs (extra-pulmonary TB).
- TB is a very ancient disease and has been documented to have existed in Egypt as early as 3000 BC.
- TB is a treatable and curable disease.
- Transmission: TB is spread from person to person through the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air.

Major challenges faced by India in controlling TBIn TB detection, India far from meeting the 2025 goal	In TB detection, India far from meeting the 2025 goal
 Lack of Awareness and Stigma Delay in diagnosis and care seeking Delay in sputum sample collection and transportation hinders timely diagnosis. Poor Healthcare Infrastructure Poverty and Malnutrition Drug-Resistant TB Co-Infection with HIV 	 Point-of-care testing TB prevention measures TB vaccine rollout Collaborative effort involving community action Technological innovations (AI) Multisectoral partnerships



Important Facts:

- World TB Day is observed on March 24.
- TB Mukt Bharat (TB-free India): India is committed to ending the TB epidemic by 2025, five years ahead of SDG target timeline.

National and international initiatives:

- * National TB Elimination Programme (NTEP)
- * National Strategic Plan (NSP) for Tuberculosis Elimination (2017-2025)
- * The Nikshay Ecosystem (National TB information system)
- * Nikshay Poshan Yojana (NPY- financial support)
- * TB Harega Desh Jeetega Campaign
- ✤ TB Free India Campaign
- * Tribal TB Initiative

Conclusion:

* By harnessing innovative solutions such as artificial intelligence, forging partnerships with stakeholders, and investing in research and development, India can effectively enhance the capacity of the public health system to eliminate TB and improve the overall health outcomes of our communities.

TAMIL NADU GOVT. SEEKS TO TRANSFER OF 'EDUCATION' BACK TO STATE LIST

- Context: Recently, Tamil Nadu's Chief Minister M.K. Stalin has called for transferring 'education' back to the State List of the Seventh Schedule of the Constitution.
- * Education, originally a State subject, was moved to the Concurrent List by the Indira Gandhi government during the Emergency.

Indian Constitution and 7th Schedule:

- The constitutional provisions in India on the subject of the distribution of legislative powers between the Union and the States are defined under several articles; the most important in this regard being specifically under Articles 245 & 246 of the Constitution of India.
- The Seventh Schedule to the Constitution of India defines and specifies the allocation of powers and functions between Union & States.
- Article 246 deals with the 7th Schedule of the Indian Constitution that mentions three lists named as;
 - ► Union List,
 - State List and
 - Concurrent List.



- * Originally there were 97 subjects in the union list but now it is 100 subjects in the union list.
- * And in the state list, there were 66 subjects but now it is 61 subjects.
- * And in the **concurrent list**, there were 47 subjects but now it is 52 subjects in the concurrent list.

Concurrent Status of Education:

* Until 1976, education was a state subject with some provisions at the central level.

According to the 42nd Amendment Act of 1976, about 5 subjects were transferred from the state to the concurrent list. they are:

- Protection of wild animals and birds
- Weights and measures •
- Administration of justice •
- Education •
- Forests
- * The 42nd amendment, 1976 changed the status of education by putting it on the concurrent list.
- * Making education a concurrent subject ensures that both the Centre and state can legislate on any aspect of education from primary to the university level.
- By having education in the concurrent list, center can implement directly any policy decisions in the states.
- * So, concurrent status of education means that there is a partnership between State government and central government when it comes to Education policy making and implementation.

Status of Education:

- * Under Central/Union List: The Center has exclusive authority to legislate for the items of this list.
 - Entry 65;
 - Research centres for special studies •
 - Scientific or technical assistance in the investigation of detection of crime.
 - Training of police officers, professionals, vocational or technical training
 - Entry 66;
 - Coordination and determination of standards • in institutions for higher education or research and scientific and technical institutions.

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- Establishment of university grant commission (UGC).
- ► Entry 67;
 - Under Article 49, protection of monuments and places and objects of National importance.

About Concurrent List:

The concept of 'Concurrent List' in the Indian Constitution has been borrowed from the **Constitution of Australia.**

- * Central Government and State Government both can make laws on the subjects mentioned under the Concurrent List.
- * While both Central and State governments can legislate on subjects mentioned under the Concurrent List, however, in case of any conflict, the law made by the Central Government prevails.
- * The matters on which uniformity of legislation throughout the country is desirable but not essential are enumerated in the concurrent list.

State List and Powers:

- * The state list contains items pertaining to local interests, aims and objectives.
- * The States have the right to legislate items on this List according to local preferences and objectives.

Criteria for Centre to interfere in 'State List':

- Article 249 gives Parliament the power to legislate concerning a subject enumerated in the State List in the national interest.
- Or, Parliament can legislate on subjects that are enumerated under the State List on three conditions:
 - When Rajya Sabha passes resolution
 - During a National emergency (Article 250)
 - When two or more states pass a resolution requesting Parliament to legislate on subjects under State List.

PARLIAMENT CLEARS 28% GST ON ONLINE GAMING, CASINOS

Context: Parliament approved amendments to the Central and Integrated GST laws to levy 28 per cent tax on the full face value of bets in online gaming, casinos and horse race clubs.

Background:

- * In July this year, the GST Council recently cleared changes in Central GST (IGST) and IGST laws to levy 28 per cent tax on full face value of bets in online gaming, casinos, and horse race clubs.
- * It also decided that GST will be levied at face value of entry level bets placed in gaming platforms and casinos.

Key-highlights:

The Central GST (Amendment) Bill, 2023, and the **Integrated GST** (Amendment) Bill, 2023 make registration mandatory for offshore e-gaming Currently, online gaming industry are paying GST at the rate of 18 per cent on platform fees/commission. Such commission varies from 5 to 20 per cent of the full face value of bets.

companies operating in India.

- ▶ Non-compliant offshore gaming platforms or websites will be blocked.
- * With the amendment to GST law, horse racing, casinos, online money gaming will be treated as actionable claim similar to lottery, betting, and gambling.
- * The amendment in IGST Act gives powers to the Government to notify such goods, so that in case of import of such goods IGST can be levied and collected as regular inter-State supply under provisions of IGST Act.

Important Terms:

- **Online Gaming:** The CGST amendment bill defines 'online gaming' as a game on the internet or an electronic network.
- Online money gaming: 'Online money gaming' means online gaming in which players pay or deposit money, including virtual digital assets (VDAs), in the expectation of winning money or VDAs, in any event including game, scheme, competition or any other activity, whether or not its outcome or performance is based on skill, chance or both.

India's online gaming industry:

- The online gaming industry grew by 28 per cent in 2021 to reach USD 1.9 billion, as per NITI Aayog estimates.
- * Internet gaming has grown in popularity in India, with millions playing games like PUBG, Free Fire, and Call of Duty.
- * According to the government's AVGC (Animation, Visual Effects, Gaming, and Comics) task force



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report, India is expected to become one of the world's biggest gaming marketplaces.

* It has risen steadily over the **past five years** and is expected to quadruple in value to 3.9 billion dollars by 2025.

Online gaming is a State Subject under Schedule 7.

India's average revenue per paying user (ARPPU) rose 11 per cent to 20 dollars in 2022.

Impact of the amendments:

* The amendments will aid in combating money laundering, illegal income, black money and other illegal activities associated with online gaming and curb evasion.

* The amendments seek to establish a robust legal

framework to avoid legal ambiguities and also to address various concerns of stakeholders.

- The amendments will not affect tax on casual online gaming, wherein no real money, betting, or wager is involved.
- * With the passage of CGST and IGST amendments, states will now have to effect similar changes in their state GST laws in their respective assemblies.

Key drivers of Gaming Industry in India:

- * Smartphone penetration
- * Affordable internet
- * Young demography of India
- * Introduction of new games with a shorter learning curve
- Positives Negatives • High Revenue generation Societal concerns Boost in start-ups since pandemic 'Internet Gaming Disorder' due to addiction to online gaming. Help people to build a professional career and build skills Tax evasions (most apps operate from outside the country) Can provide employment Lack of regulations Absence of framework Engage into increasing peer-to peer bonds

INCREASING UREA'S EFFICIENCY

Context: In order to boost the crop yields and maximise the use efficiency of imported nutrients, fortification of urea with micronutrients is a positive step.

Urea Gold Fertiliser

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- * The government recently launched 'Urea Gold' fertiliser.
- * Developed by the state-owned Rashtriya Chemicals and Fertilizers Ltd (RCF), it is basically urea fortified with sulphur(s).
- * Normal urea contains 46% of a single plant nutrient: Nitrogen or N.
- * Urea Gold has 37% N plus 17% sulphur or S and aims at two things.
- * Deliver S along with N: The first is to deliver S along with N. Indian soils are deficient in S, which oilseeds and pulses - the country is significantly importdependent in both - particularly require.
- * Improve the nitrogen use efficiency (NUE): The

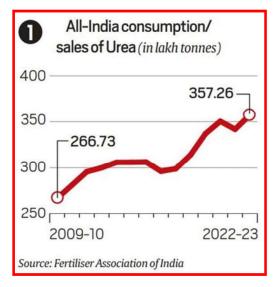
second is to improve the nitrogen use efficiency (NUE) of urea. Coating of Sulphur over urea ensures a more gradual release of N. By prolonging the urea action, the plants stay greener for a longer time. Farmers tend to apply urea when they notice the leaves turning yellowish. If the crop retains greenness for an extended period, they would reduce the frequency of application and use, say, only two bags, as against three, for an acre of paddy or wheat.

Fertilisers are essentially food for crops. They, like humans, need nutrients – primary (N, P, K), secondary (S, calcium, magnesium) and micro (iron, zinc, copper, manganese, boron, molybdenum) for plant growth and grain yield.

What are the concerns?

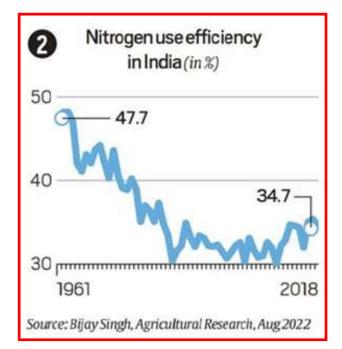
- * Urea is India's most widely used fertiliser, with its consumption/sales rising from 26.7 million tonnes (mt) to 35.7 mt between 2009-10 and 2022-23.
- * There are two concerns over rising urea consumption.
 - > Imported natural gas in production: The first is imports, which accounted for 7.6 mt out of the total 35.7 mt sold last fiscal. Even with regard to domestically-manufactured urea, the feedstock used - natural gas - is mostly imported. India's nearly 36-mt annual consumption of urea is

today next only to China's 51 mt, with the latter's production largely coal-based.



* Declining NUE: The second concern is NUE. Barely 35% of the N applied through urea in India is actually utilised by crops to produce harvested yields. The balance 65% N is unavailable to the plants, much of it "lost" through release into the atmosphere as ammonia gas or leaching below the ground after conversion into nitrate. Declining NUE, from an estimated 48% in the early 1960s, has resulted in farmers applying more and more fertiliser for the same yield.

What measures are required?



* A country with hardly any natural gas or rock phosphate, potash and sulphur reserves shouldn't, beyond a point, encourage the consumption of these commodity fertilisers in plain-vanilla form.

- * Instead, they must be coated with secondary nutrients (Sodium, calcium and magnesium) as well as micronutrients (zinc, boron, manganese, molybdenum, iron, copper and nickel).
- * Coating not only allows urea or DAP to be used as "carrier products" for delivering secondary and micro nutrients to crops.
- * It improves their own N and P use efficiency through synergetic effects and controlled release that, in the case of urea, helps reduce losses through ammonia volatilisation and nitrate leaching.

Government measures to reduce Urea's Consumption:

- * In 2015, the Centre made it mandatory to coat all indigenously manufactured and imported urea with neem oil.
- This was followed by replacing 50-kg bags with 45-kg ones in March 2018, and the launch of liquid 'Nano Urea' by the Indian Farmers' Fertiliser Cooperative (IFFCO) in June 2021.



Context: The Odisha government has sent a letter to district officials underlining requests to divert forest land for nonforestry purposes, which has now exclusively removed the concept of 'deemed forest' in the state.

Background:

* After the Parliament passed the Forest Conservation Amendment Act. 2023, in the monsoon session, the Odisha government has taken steps to implement the new law.



- Earlier, nearly half of Odisha's forest land was 'deemed forest'.
- Under the new legislation, all forest land diverted for non-forest purposes by any authority before

December 12, 1996, will not attract the changes as per the law.

- * Also, any survey or exploration will also not be treated as a non- forestry activity.
- The 1996 Godavarman verdict by the Supreme Court enjoined States to bring in such unrecorded land that conformed to the 'dictionary' meaning of forest'.
- The judgment mentioned that the "forests, will not only include forest as understood in the dictionary sense, but also any area recorded as forest in official records, irrespective of ownership."

What are Deemed Forests?

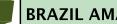
- * Deemed forest is forest land that hasn't been recorded as such by the Centre or States.
- * The concept of deemed forests has not even been clearly defined in any law including the Forest **Conservation Act 1980.**
- * An expert committee constituted by the Karnataka government after the Supreme Court order (in T N Godavarman Thirumalpad (1996) Case) identified 'deemed forests' as "land having the characteristic of forests irrespective of the ownership'". This includes:
 - Thickly wooded areas of the Revenue Department ► not handed over to the Forest Department.
 - ► Thickly wooded areas recommended to be handed over to the Forest Department.
 - Thickly wooded land distributed to grantees but not cultivated.
 - ▶ Thickly wooded plantations of the Forest Department.

What is the dispute around it?

- * Overpowering Central government: The latest Forest Survey of India records Odisha as having 52,156 square km of forest coverage, which is 33.50% of the State's geographical area, as compared to 21.71% of forest cover at the national level.
 - However of the nearly **19,200 hectares** of **forest** land diverted nationally for mining between 2017-2022 about 8,000 hectares was from Odisha.
 - ► As, deemed forest has been removed from the definition of forests, Odisha government cannot give land for mining purpose without the consent of Centre.
- * Conflicting Article 371 (a): Tribal communities have also stated that it challenges the essence of traditional customary and indigenous ownership rights of the people over their land and forest as per Article 371(a) of the Constitution.

Impacts:

- * The community protected forests in tribal districts of the state and bio-cultural habitats of vulnerable tribal groups such as the Dongria Kondhs who have right on deemed forest areas.
- * These communities have claimed community forest rights and habitat rights on such forests.
- * Thus the removal of the deemed forest areas from the Act could adversely affect the statutory rights of the communities and can open up rich forest and bio-cultural habitats for extraction.



BRAZIL AMAZON SUMMIT

Context: The two-day summit of the Amazon Cooperation Treatv Organisation (ACTO) recently took place in Belem after an over-decade-long gap. It sought much needed consensus on protecting the all-important rainforest and methods of sustainably developing the member economies without damaging the Amazon.

About:

* The summit was the **first**ever gathering of its kind in 14 years aimed at protecting the **world's** largest and most prolific rainforest that covers significant swathes of the South American continent.



- * During the Summit, the leaders of eight South American nations that are home to the Amazon met in the Brazilian city of Belem, with the task of agreeing to a list of unified environmental policies and measures to bolster regional cooperation and stop the destruction of the rainforest.
- * The summit adopted what host country Brazil called a "new and ambitious shared agenda" to save the rainforest.

Key points of the Summit:

- * Against Deforestation: The final joint declaration, called the 'Belem Declaration', created an alliance for combatting forest destruction, with countries left to pursue their individual deforestation goals.
- * Protection of Indigenous rights and society: The nearly 10,000-word road map asserted Indigenous rights and protections, while also agreeing to

cooperate on water management, health, common negotiating positions at climate summits, and sustainable development.

* Establishment of a Science body: The declaration additionally established a science body to meet annually and produce authoritative reports on science related to the Amazon rainforest, akin to the United Nations' International Panel on Climate Change.

Amazon Cooperation Treaty Organization (ACTO):

- * ACTO was formed in 1995 to protect and manage the Amazon.
- * The group aimed to recognize the reality that the Amazon rainforest crossed borders and needed international management, but also to protect the Amazon countries' sovereignty over their territory.
- Member countries: Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela are members of the organisation.

All the countries at the summit have ratified the Paris climate accord, which requires signatories to set targets for reducing greenhouse gas emissions.

Problems unaddressed:

- * The summit stopped short of environmentalists' and Indigenous groups' boldest demands, including for all member countries to adopt Brazil's pledge to end illegal deforestation by 2030 and Colombia's pledge to halt new oil exploration.
- * It also did not fix a deadline on ending illegal gold mining, although leaders agreed to cooperate on the issue, and did not include shared commitments to zero deforestation by 2030.

The Amazon forests:

- * These are large tropical rainforests occupying the drainage basin of the Amazon River and its tributaries in northern South America and covering an area of 6,000,000 square km.
- * Tropical forests are **closed-canopy forests** growing within 28 degrees north or south of the equator.
- * They are very wet places, receiving more than 200 cm rainfall per year, either seasonally or throughout the year.
- * Temperatures are uniformly high between 20°C and 35°C.
- * The rainforest, at roughly twice the total land area of India, is
 - a key producer of oxygen
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- a major carbon sink for a warming planet
- the home of tens of thousands of species of plants, animals and insects that cannot be found anywhere else in the world

Geographical facts:

- * Such forests are found in Asia, Australia, Africa, South America, and Central America, Mexico and on many of the Pacific Islands.
- * Comprising about 40% of Brazil's total area, it is bounded by the Guiana Highlands to the north, the Andes Mountains to the west, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.

Threats to Amazon forests:

- * Narco-deforestation: is an infamous phenomenon in South American countries, involves funneling drug profits into environmental crimes like land grabs, illegal mining, poaching and illicit logging.
- * Ignored Indigenous communities: A lack of government enforcement does not incentivize businesses or communities to plan for long-term stewardship. The Indigenous communities that have inhabited the area for generations have lifestyles that naturally protect and sustain the Amazon ecosystem.

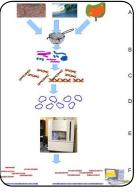


METAGENOME SEQUENCING

Context: In order to get a breakthrough in the definitive identification of SARS-CoV-2, Scientists didn't go the more time-consuming microbiology route; instead, and in a break from tradition, they were directly subjected to genome-sequencing and bioinformatic analysis, which helped the scientists quickly identify the virus. This new approach is called metagenomics.

What is Metagenomics?

- * Metagenomics is a field of molecular biology and genomics.
- ✤ It refers to the application of sequencing techniques to analyse the totality of the genomic material (DNA or RNA) present in a sample.
- Metagenomics uses gene sequencing to discover proteins in samples from environments across Earth,





microbes living in the soil, in extreme environments like hydrothermal vents, deep in the oceans and in our guts and on the skin.

* A vast number of proteins, beyond those catalogued in well-studied organisms, exist in the natural world.

What are its major applications?

- * Microbiome **Research**: Understanding the composition and functional roles of microbial communities in various environments, such as the human gut, soil, oceans, and plants. This knowledge has implications for health, agriculture, and ecology.
- Biotechnology: Identifying novel enzymes, pathways, and metabolic functions from environmental samples, which can be used for industrial processes, such as bioremediation, biofuel production, and the synthesis of valuable chemicals.
- * Disease Diagnosis: Investigating the role of microbial communities in human health and disease. Metagenomic analysis can help identify potential pathogens, study the human microbiome, and understand the impact of microbial dysbiosis on various health conditions.
- Environmental Monitoring: Assessing the impact of pollution, climate change, and other environmental factors on microbial ecosystems. Metagenomics can provide insights into ecosystem health and aid in conservation efforts.
- * Pharmaceutical Discovery: Exploring natural products and bioactive compounds produced by diverse microorganisms in the environment, which may have potential applications in drug development.
- * Evolutionary Studies: Examining the evolutionary relationships between microorganisms and tracing the evolution of specific genes or functions within microbial communities.
- Agriculture and Food Safety: Analyzing the microbiota of crops, livestock, and food products to improve agricultural practices, enhance crop yield, and ensure food safety.
- * Bioprospecting: Identifying novel species and genetic elements with unique properties that can be used for various purposes, including biotechnology, medicine, and industrial processes.

How significant is the new technique?

- * It allows researchers to analyze the collective genomes of diverse microorganisms within a given sample, providing insights into the genetic diversity, functional capabilities, and interactions of these microbial communities.
- ✤ Metagenomics is particularly valuable for understanding the microbial composition of complex ecosystems and has applications in various fields, including ecology, biotechnology, and medicine.



TACKLING THE ETHICAL ISSUE OF ERADICATING ENERGY POVERTY

Context: At the G20 meetings in Goa, India, energy ministers debated climate change and the shift to clean energy. A delegate mentioned the ethics-climate change link, prompting officials to suggest an approach to ethical aspects of the energy transition.

Key-highlights of the discussion:

Severity of the Problems:

- Nearly 700 million people lack access to clean energy, and nearly 2.3 billion people are still burning firewood, farm waste and animals for cooking.
- This causes the death of nearly 4 million people annually, most of them women and children, as a result of pollution, according to the agency's report, quoting the World Health Organization.
- Energy Transition and Ethics: The leaders 濲 highlighted the neglect of a significant ethical concern during discussions about energy transition and climate change. Millions of people globally suffer from energy poverty, a critical issue that needs attention.
- * Energy Poverty in Host Country India: Despite being the host country, India faces energy poverty to some extent. India has made considerable progress in addressing energy poverty, but challenges remain.
- Ethics and Energy Transition: Some participants passionately brought ethics into the conversation about energy transition. They emphasized that the ethical aspect often overlooked is the lack of access to electrical energy for approximately 700 million people worldwide.

Ethical Considerations in Energy Transition:

* Energy Poverty:

- Millions of people worldwide lack access to reliable and affordable energy.
- Transitioning to cleaner energy sources should address energy poverty and provide equitable energy access.

Environmental Impact:

- The shift to renewable energy aims to reduce environmental harm.
- Ethical concerns involve minimizing ecological damage and protecting ecosystems during this transition.

* Just Transition:

- > Ensuring a fair and just transition for workers and communities dependent on fossil fuel industries.
- Ethical responsibility lies in minimizing job losses and supporting affected communities.

* Global Responsibility:

- Developed nations often have higher carbon footprints, contributing to climate change.
- Ethical considerations demand that these countries take a lead in transitioning and support less-developed nations.

* Technological Equity:

- Balancing technological advancements with affordability to prevent creating disparities.
- Ethical energy transition should prioritize accessible technologies for all socio-economic groups.

* Inter-Generational Equity:

- Transition decisions impact future generations. ►
- Ethical responsibility involves minimizing negative consequences for future populations.

Transparency and Participation:

- ▶ Including diverse voices in decision-making processes to ensure a just transition.
- Ethical energy transition respects democratic values and promotes inclusivity.

* Climate Justice:

- Addressing climate change-induced vulnerabilities faced by marginalized communities.
- > Ethical considerations emphasize the need for equitable solutions and supporting those disproportionately affected.

* Long-Term Sustainability:

- > Prioritizing long-term benefits over short-term gains in energy transition.
- ▶ Ethical decision-making focuses on creating sustainable solutions for the future.
- * Social and Economic Impact:
 - Understanding and mitigating potential negative social and economic consequences of energy transition.
 - Ethical approach entails balancing environmental benefits with social well-being.

Conclusion

There is need for the leaders to commit and allocate a separate clause for energy poverty, methods to eliminate it in clear language and a plan that can be monitored and measured. This ensures more just, equitable and fair energy transition for all.



Context: A stern judicial veto from the Punjab & Haryana High Court has put a question mark on the legality of punitive demolitions of homes and other structures by bulldozers.

This issue delves into the intersection of legal regulations, the role of governmental authorities, and the ethical considerations that arise when homes and structures are dismantled.



Ethical Dimensions in Demolitions

- * Legal Implications of Demolitions: The judicial intervention has raised fundamental questions about the legality of punitive demolitions.
 - The court's intervention underscores the importance of adhering to due process and ensuring that demolitions are carried out within the framework of established laws and regulations.
 - This not only safeguards individual rights but also upholds the principle of rule of law, which forms the cornerstone of a just society.
- * Balancing Law with Ethical Considerations: While legality provides the foundation, the role of ethics cannot be undermined in matters of demolitions.
 - > Ethical considerations entail a broader perspective that evaluates the impact of such actions on vulnerable populations, including those who might be affected unjustly due to inadequate legal recourse.
 - > Ethical decision-making necessitates a balance between enforcing the law and ensuring that human dignity and rights are upheld.
- * Ethics in the Process of Demolitions: The process of carrying out punitive demolitions must be infused

with ethical principles. Transparency, accountability, and compassion should guide the actions of authorities involved.

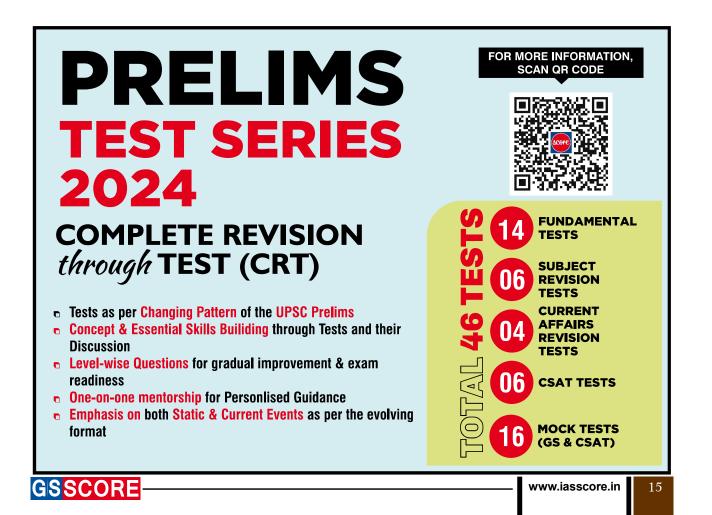
- Ensuring that affected individuals are informed, provided alternative arrangements, and have the opportunity to present their case aligns with ethical conduct, even when complying with legal mandates.
- * Role of Bulldozers in Demolitions: Bulldozers symbolize both the efficiency of modern technology and the potential for indiscriminate destruction.
 - Their role in demolitions raises ethical concerns regarding the proportionality of response.
 - Authorities must carefully assess whether the use of bulldozers is justified in each case, considering the extent of the violation, potential harm, and the need to avoid excessive damage.
- Humanitarian and Ethical Imperatives: As the legality of punitive demolitions comes under scrutiny,

it is imperative to recognize the humanitarian and ethical dimensions.

- The impact of such actions on displaced individuals, families, and communities necessitates a compassionate approach.
- Mitigating the adverse consequences and ensuring access to basic amenities align with ethical values that prioritize human well-being.

Conclusion:

* It is important to strike a balance between legal mandates and ethical principles to ensure that punitive demolitions, when deemed necessary, are carried out in a just, transparent, and compassionate manner. A thorough examination of the legal framework and ethical underpinnings will pave the way for a more humane approach towards addressing such complex issues.



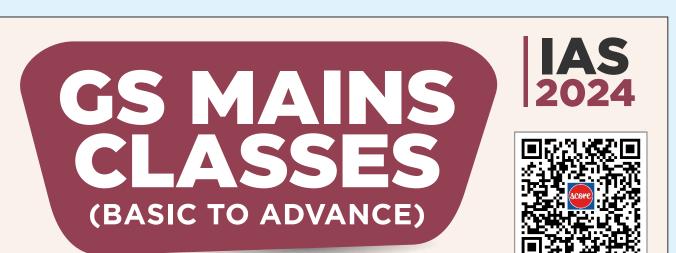




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Section B [SPECIALS]

Торіс

cos Revamp of colonial-era laws



WEEK - 3 (AUGUST, 2023)

REVAMP OF COLONIAL-ERA LAWS

Context: India's government moved three bills in the lower house of parliament aimed at overhauling some colonial-era criminal laws, ranging from the controversial sedition law to strengthening laws that protect women and minors.

About the proposed Bills:

- * The Bills are going to repeal and replace the Indian Penal Code (IPC), the Code of Criminal Procedure(CrPC), and the Indian Evidence Act, which were implemented by the British before the country's independence in 1947 as under;
- * The bill seeks to replace the **colonial-era sedition** law which was mainly used against Indian political leaders seeking independence from British rule.
- * Also, the state-of-the-art technologies have been incorporated in these laws.

Previous Act/Code	Proposed Code	Major Changes
Indian Penal Code, 1860	Bharatiya Nyaya Sanhita Bill, 2023	It will have 356 sections instead of the earlier 511 sections, 175 sections have been amended, 8 new sections have been added and 22 sections have been repealed.
Criminal Procedure Code, 1898	Bharatiya Nagarik Suraksha Sanhita Bill, 2023	With 533 sections, 160 sections have been changed, & 9 new sections have been added and 9 sections have been repealed.
Indian Evidence Act, 1872	Bharatiya Sakshya Bill, 2023,	It will now have 170 sections instead of the earlier 167, 23 sections have been changed, 1 new section has been added and 5 repealed.

* The objective of these laws will not be to punish anyone but give justice and in this process punishment will be given where it is required to create a sense of prevention of crime.

Major changes from IPC to BNS Bill

* The BNS Bill contains 356 provisions as compared to 511 sections in the IPC. Here are the major changes it proposes.

Sedition:

- * The legislation proposed also seeks to replace the sedition law, which came into force in 1860.
- * The British used the provision to punish Indian leaders seeking independence during the 19th and early 20th century.
- * IPC Section 124-A deals with offence of sedition, prescribing sentence of life imprisonment or imprisonment which may extend to three years, to which fine may be added.
- * Meanwhile, the BNS Bill's provision 150 under the chapter pertaining to offences against the State covers acts endangering sovereignty, unity and integrity of India.
 - The section says, "Whoever, purposely or knowingly, by words, either spoken or written, or by signs, or by visible representation, or by

electronic communication or by use of financial mean, or otherwise, excites or attempts to excite, secession or armed rebellion or subversive activities, or encourages feelings of separatist activities or endangers sovereignty or unity and integrity of India; or indulges in or commits any such act shall be punished with imprisonment for life or with imprisonment which may extend to seven years and shall also be liable to fine."

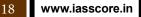
Murder:

- The offence of murder covered under section 302 of • the IPC, is covered under provision 101 of the BNS Bill.
- The punishment, life term or death sentence, remains unchanged.
 - > Provision 101 (2) of the BNS Bill says, "when a group of five or more persons acting in concert commits murder on the ground of race, caste or community, sex, place of birth, language, personal belief or any other ground each member of such group shall be punished with death or with imprisonment for life or imprisonment for a term which shall not be less than seven years, and shall also be liable to fine."

Snatching:

- * Another change is a new provision on "snatching" under section 302 of the BNS Bill.
- * It says, "Theft is 'snatching' if, in order to commit theft,

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the offender suddenly or quickly or forcibly seizes or secures or grabs or takes away from any person or from his possession any moveable property."

* It proposes imprisonment of up to three years, and liability to fine for whoever commits snatching.

Terrorism:

- * In a first, the BNS Bill defines terrorism, which was not done in the IPC.
- * **Provision 111** of the BNS Bill mentions, "A person is said to have committed a terrorist act if he commits any act in India or in any foreign country with the intention to threaten the unity, integrity and security of India, to intimidate the general public or a segment thereof, or to disturb public order by doing an act."

Defamation:

- * IPC directs a punishment of simple imprisonment of up to two years, or with fine, or with both for the offence of defamation.
- * The BNS Bill adds community service to the punishment, proposing a simple imprisonment of up to two years, or with fine, or with both or with community service.

Suicide:

* From a sentence of up to one year or with fine or both under Section 309 of IPC, Section 224 of the BNS Bill covers suicide proposing, "whoever attempts to commit suicide with the intent to compel or restrain any public servant from discharging his official duty shall be punished with simple imprisonment for a term which may extend to one year or with fine or with both or with community service."

Marrying a woman, having sexual intercourse with a woman using "deceitful means":

- * Section 69, dealing with sexual offences against women and children, of the BNS Bill says "Whoever, by deceitful means or making by promise to marry to a woman without any intention of fulfilling the same, and has sexual intercourse with her, such sexual intercourse not amounting to the offence of rape, shall be punished with imprisonment of either description for a term which may extend to ten years and shall also be liable to fine."
- * "Deceitful means" is explained to include the false promise of employment or promotion, inducement or marrying after suppressing identity.

Other proposed changes

- * Capital punishment for mob lynching: The proposed bills also contain provisions allowing capital punishment for perpetrators of mob lynchings. They also prescribe minimum sentences of 20 years for gang rape.
- * Community Service provision: The bills also introduce community service provisions for petty crimes rather than custodial sentences.
- * Fixed Timelines: And fixed timelines would be imposed for trials and criminal investigations.

Need for such a legislation:

* From 1860 to 2023, the criminal justice system of India continued to be operated on the basis of the laws made by the British Parliament, but now these three laws will be replaced with new laws imbibing the Indian soul, which will bring a big change in our criminal justice system.

Significance:

- * The definition of documents has been expanded to include electronic or digital records, e-mails, server logs, computers, smart phones, laptops, SMS, websites, locational evidence, mails and messages available on devices, which can be used in courts, which will give reduce the burden of officials.
- * These laws will digitize the entire process from FIR to case diary, case diary to charge sheet and from charge sheet to judgement.

Criminal Justice System in India:

* Criminal Justice System refers to the agencies of government charged with enforcing law, adjudicating crime, and correcting criminal conduct.

* Objective:

- To prevent the occurrence of crime
- To punish the transgressors and the criminals
- To rehabilitate the transgressors and the criminals



WEEK - 3 (AUGUST, 2023)

- ► To compensate the victims as far as possible
- To maintain law and order in society
- To deter offenders from committing any criminal act in the future

Why there is a need for reforms?

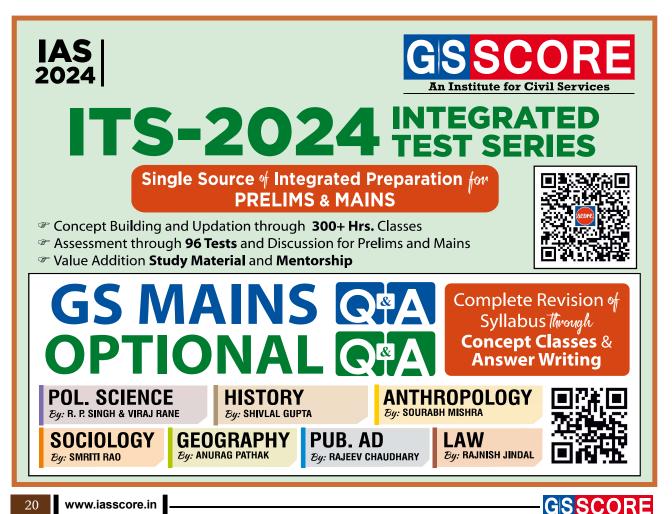
- * Colonial Legacy: The criminal justice system- both substantive and procedural- are replica of the British colonial jurisprudence, which were designed with the purpose of ruling the nation.
 - Therefore, the relevance of these 19th century laws is debatable in the 21st century.
- * Ineffective Justice Delivery: The purpose of the criminal justice system was to protect the rights of the innocents and punish the guilty, but nowadays the system has become a tool of harassment of common people.
- * Pendency of Cases: According to Economic Survey 2018-19, there are about 3.5 crore cases pending in the judicial system, especially in district and subordinate courts, which leads to actualization of the maxim Justice delayed is justice denied."

- * Huge Undertrials: India has one of the world's largest numbers of under-trial prisoners.
 - ► According to National Crime Records Bureau (NCRB)-Prison Statistics India, 67.2% of our total prison population comprises of under trial prisoners.
- * Police Issue: Police are being a front line of the criminal judiciary system, which played a vital role in the administration of justice. Corruption, huge workload and accountability of police is a major hurdle in speedy and transparent delivery of justice.

Draft Rules of Criminal Practice, 2020: The Draft Rules recommends reforms in investigation and trial, including proposals to employ separate teams of lawyers to help the police during the probe and for the trial; details to be covered while drafting spot panchnamas and even corrections in body sketches.

Way forward:

* The bills - replacing the Indian Penal Code, the Code of Criminal Procedure, and the Indian **Evidence Act** – have been referred to a parliamentary committee for further deliberation



Section C [PRELIMS]

— To Attempt -

Weekly Current Affairs Test, Visit

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- **C** Cloudbursts
- **G3** India's G20 theme of 'Vasudhaiva Kutumbakam' & Objections
- **EC** publishes final report on 'Assam delimitation'
- **14** States yet to join Centre's flagship education scheme
- Major laws receive Presidential assent (List)
- **Global Initiative on Digital Health**
- **MoEFCC** refuses the merger of autonomous bodies
- **vs** Vishwakarma scheme
- **C3** PM e-bus Sewa scheme
- **G** Russia launches Luna-25







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Context: Cloudbursts are а common occurrence in Himalayan regions but experts are alarmed by the increase in extreme weather-related events.

What is Cloudburst?

* A cloudburst is defined as an intense downpour that lasts only a brief time and is occasionally accompanied by hail and thunder.

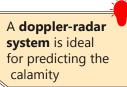


- It is defined by the India Meteorological Department (IMD) as unexpected precipitation that exceeds 100mm (or 10 cm) per hour across a region of land that is between 20 and 30 square kilometres.
- * It occurs in high-altitude regions due to the formation of low-pressure areas (LPAs).

LPAs form under areas of wind divergence that occur in upper levels of the troposphere.

► LPAs accumulate clouds with great force on the top of mountains and result in orographic precipitation.

- 嶶 Phenomenon: The phenomenon that is responsible for this is 'orographic lift', a process by which clouds that are already to rain are pushed up by warm air currents.
 - ► As they reach higher elevations, the water droplets within the clouds become bigger and new ones are formed.
 - These dense clouds eventually burst, unable to hold the large volume of moisture.



* This results in torrential downpours in the region right below and leads to overflowing of water bodies in a very short duration of time.



INDIA'S G20 THEME OF 'VASUDHAIVA KUTUMBAKAM' & **OBJECTIONS**

Context: Defending the use of the Sanskrit term Vasudhaiva Kutumbakam (The world is one family) in its G-20 logo, the Ministry of External Affairs said it uses only the "English version" of the phrase — "One Earth, One Family, One Future" — in its summary documents and outcome statements.

Why China made the objections?

- * China has reportedly voiced its opposition towards the inclusion of the Sanskrit phrase 'Vasudhaiva Kutumbakam' in documents pertaining to recent G20 Energy Ministerial Meeting as also other G20 documents.
- * Arguments provided: China has objected to the use of this Sanskrit phrase, arguing that it is not recognised by the United Nations.
 - The six official languages of the UN are Arabic, Chinese, English, French, Russian and Spanish.

'Vasudhaiva Kutumbakam'

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- Translated as "the world is one family," this phrase has regularly been used by Indian Prime Minister Narendra Modi in his speeches and is inscribed at the entrance of India's parliamentary building.
- 'Vasudhaiva Kutumbakam' is drawn from the ancient Sanskrit text of the Maha Upanishad.
- The theme affirms the value of all life human, animal, plant, and microorganisms - and their interconnectedness on the planet Earth and in the wider universe.





The Election Commission published Context: its final report on the delimitation of assembly and parliamentary constituencies in Assam, keeping their total numbers unchanged at 126 and 14 respectively.

Key-highlights of Order

* In its final order, the poll panel has revised the nomenclature of one parliamentary and 19 assembly constituencies.

19

two

assembly

constituencies have

been reserved for

Lok

Reservation of constituencies for Scheduled Castes and Scheduled Tribes has been done on the basis of the provisions laid down in Article 330 and 332 of the **Constitution of India**

Scheduled Tribes (STs). One Lok Sabha and nine assembly constituencies have been reserved for Scheduled Castes (SCs).

and

Sabha

* All assembly and parliamentary constituencies in the state were delimited (redrawn) based on the 2001 Census.

What is Delimitation?

- * Delimitation means the act or process of fixing limits or boundaries of territorial constituencies in a country or a province having a legislative body, as per the Election Commission of India.
- In India, the job of delimitation is assigned to the Delimitation Commission or a Boundary Commission.
- * Since Independence, the Commissions have been constituted four times - in 1952, 1963, 1973 and 2002.

Why was Assam left out?

- * Under the provisions of the Delimitation Act, 1972, the last delimitation of constituencies in Assam was done on the basis of census figures, 1971, by the then Delimitation Commission in 1976.
- * However, when the exercise was repeated in 2002, Assam was not a part of that. Not just Assam, but Arunachal Pradesh, Manipur, and Nagaland, were also left out after a Public Interest Litigation (PIL) was filed in the Guwahati High Court challenging the use of the 2001 Census for reference.
- * In February 2020, then President Ram Nath Kovind paved the way for the delimitation exercise in Assam, rescinding the February 8, 2008 order.

14 STATES YET TO JOIN CENTRE'S FLAGSHIP EDUCATION SCHEME

Context: At present, 14 States and Union Territories are yet to sign a crucial Memorandum of Understanding (MoU) with the Union Education Ministry, which mandates the under the Centre's flagship scheme for Staterun higher education.

What is the new Scheme?

* Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA) is the new name for the Ministry's scheme to improve the quality of higher education in State Universities - through curricular and programme changes, teacher training, physical and digital infrastructure, accreditation, and enhancing employability - while ensuring equity, access, and inclusion.



- * Funding: PM-USHA scheme has 60:40 funding split between Centre and States, with no extra money for NEP reforms.
- * It provides an outlay of ₹12,926.10 crore between 2023-24 and 2025-26.

What are State's Concerns?

- * States like Kerala, Tamil Nadu, and West Bengal are among the 14 States and Union Territories that have not yet signed the crucial MoU with the Union Education Ministry.
- 濲 This MoU is necessary to receive funds of nearly ₹13,000 crore over the next three years for staterun higher education under the Centre's Flagship Scheme.
- * The states who have not signed yet are concerned as 40% of the PM-USHA budget must be borne by the States themselves, and no extra funds have been earmarked for NEP reforms.



What are the issues in the higher education system?

- * National Education Policy 2020 (NEP) is a guiding force in preparing the base for **PM-USHA**.
- * NEP has identified some of the major problems currently faced by the higher education system in India, which are:
 - > A severely fragmented higher educational ecosystem; less emphasis on the development of cognitive skills and learning outcomes
 - > A rigid separation of disciplines, early specialization, and streaming of students into narrow areas of study
 - ► Limited access particularly in socio-economically disadvantaged areas, with few HEIs that teach in local languages
 - Limited teacher and institutional autonomy
 - Inadequate mechanisms for merit-based career ≻ management and progression of faculty and institutional leaders
 - Lesser emphasis on research at most universities and colleges, and lack of competitive peerreviewed research funding across disciplines; g. Suboptimal governance and leadership of HEIs
 - An ineffective regulatory system; and large affiliating universities result in low standards of undergraduate education.

MAJOR LAWS RECEIVE PRESIDENTIAL ASSENT (LIST)

Context: Several by new laws, passed Parliament recently came into force after they received the assent of President Droupadi Murmu. An official gazette notification in this regard was issued by the government.

The List:

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The legislations that become operational are the:

- Jan Vishwas (Amendment of Provisions) Act, 2023
- The Government of National Capital Territory of Delhi (Amendment) Act, 2023
- The Digital Personal Data Protection Act, 2023
- Registration of Births The and Deaths (Amendment) Act, 2023
- The Indian Institutes of Management (Amendment) Act, 2023
- The National Dental Commission Act, 2023
- The Offshore Areas Mineral (Development and Regulation) Amendment Act, 2023

Others:

- * Prior to the above the following new laws also became effective:
 - The Mines and Minerals (Development and Regulation) Amendment Act, 2023
 - The Cinematograph (Amendment) Act, 2023
 - The Forest (Conservation) Amendment Act, 2023
 - The Constitution (Scheduled Tribes) Order (Second Amendment) Act, 2023
 - ► The Constitution (Scheduled Tribes) Order (Amendment) Act, 2023
 - The Multi State Cooperative Societies Amendment Act 2023
 - The Biological Diversity (Amendment) Act, 2023

How a Bill becomes an Act?

- * The Indian Constitution under Article 246 and Schedule VII granted the power to the Parliament and State Legislatures to make laws.
- * The constitution of India gives the various stages to pass the Bill.
- The Bill when passed from both the houses of the parliament and take the assent from the President of India, Bill becomes the "Act of Legislature" or "A Statute".
- Types of bills passed in the Parliament: ordinary bill, money bill, financial bill and Constitutional Amendment Bill etc.

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e Presidential assent (List)Types of Bills
It is concerned with law making on matters other than money.
The Bill deals with matter other than financial subjects.
It is concerned with financial matters (taxation, public expenditure etc.)
It is concerned with the amendment of the provisions of the Constitution.
The bill is introduced before the Parliament to replace an ordinance with or without amendments promulgated by the President



GLOBAL INITIATIVE ON DIGITAL HEALTH

India in collaboration with the World Context: Health Organization (WHO) is going to launch the 'Global Initiative on Digital Health' as part of the ongoing G-20 summit in Gandhinagar, Gujarat.

About the initiative:

- * It is first-of-its-kind global initiate aimed at data converge, interface of health platforms and investments in the digital health space around the globe.
- * The G20 summit is also working on bringing in the crucial interim Medical Countermeasure (MCM) - which is a 'network of networks approach' in collaboration with WHO.
- * This global digital platform will include an investment tracker, an ask tracker and a library of existing digital health platforms.
- * The initiative has also **found funding** from global partners.
- * The global platform for data sharing will offer **no** data about its users but will share analyses and work at inter operational ability of data.
- * Other initiatives in similar direction:
 - The summit is also working at garnering support ► for setting up a Climate and Health Initiative (CHI) in India, in collaboration with the Asian Development Bank and the launch of patient and healthcare workforce mobility portal.
 - It will explore the role of traditional complimentary and integrative medicine in addressing pressing health challenges and driving progress in global health and sustainable development.

Importance of Digital Health:

* Digital health has the potential to prevent disease

and lower healthcare costs, while helping patients monitor and manage chronic conditions.

- It can also tailor medicine for individual patients. *
- Healthcare providers also can benefit from advances 嶶 in digital health.
- * Digital tools give healthcare providers an extensive view of patient health by significantly increasing access to health data and giving patients greater control over their health.
- The result is increased efficiency and improved medical outcomes.

MOEFCC REFUSES THE MERGER OF AUTONOMOUS BODIES

Context: Recently, Ministry of Environment, Forests and Climate Change (MoEFCC) issued a notification mentioning to get back from its move to establish integrated regional offices by merging offices of the Forest Survey of India (FSI), the National Tiger Conservation Authority (NTCA), the Wildlife Crime Control Bureau (WCCB), and the Central Zoo Authority (CZA).

About the merger:

- * The merger notification proposes to reorganize existing regional offices by collaborating all bodies.
- The MoEFCC dropped the merger plan, likely owing to technical and administrative difficulties in merging the institutions in question.
- * The NTCA is the managing authority of **Project Tiger** and India's Tiger Reserves.
- * The FSI is a **scientific body** that primarily deals with forest data.
- The WCCB is an **enforcement authority**.
- And the CZA's purview is limited to the functioning of zoos.

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Functions of the autonomous bodies:					
Parameters	NCTA	WCCB	CZA	FSI	
Established by	National Tiger Conservation Authority (NTCA) is a statutory body under the Ministry of Environment, Forests and Climate Change.	It is a statutory multi-disciplinary body established by the Government of India to combat organized wildlife crime in the country.	The Central Zoo Authority (CZA) is a statutory body under the Ministry of Environment, Forests, and Climate Change.	Forest Survey of India (FSI) is a premier national organization under the union Ministry of Environment and Forests.	

Administered under	The Wildlife Protection Act of 1972 was amended in 2006 to provide for constituting the NTCA.	It was constituted by amending the Wild Life (Protection) Act, 1972.	It was established in 1992 under the Wildlife (Protection) Act of 1972.	It functions under the Ministry of Environment and Forests. It was founded in 1981.
Chaired by	The Inspector-General of Forests, in charge of project Tiger, will be ex-officio Member Secretary.	It is governed by Chief Wildlife warden.	It is chaired by the Environment Minister and consists of ten members and a member-secretary	FSI is headed by a Director General supported by two Joint Directors and eight Deputy Directors at headquarters.
Function	Approving the tiger conservation strategy of state governments. Establishing tourism standards and project tiger guidelines for tiger reserves.	It assists foreign authorities and international organization concerned to facilitate co- ordination and universal action for wildlife crime control.	The Central Zoo Authority's mission is to provide better upkeep and veterinary care to the wild animals housed in zoos in India to ensure their conservation through best practices of management and bringing education & awareness among the people.	Acting as a nodal agency for collecting, compiling, storing and disseminating spatial database on forest resources.

VISHWAKARMA SCHEME

After the announcement of Prime Context: minister (PM) to launch 'Vishwakarma scheme' in his Independence day speech, the **Cabinet** Committee on Economic Affairs approves the scheme, with an outlay of Rs.13,000 crore.

Highlights of the scheme:

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- * Objective: The scheme aims at improving the quality, as well as the reach of products and services of artisans and craftspeople and to ensure that the 'Vishwakarmas' are integrated with the domestic and global value chains.
- Targeted beneficiaries: 18 traditional trades such as carpenter, boat maker, armourer, blacksmith, hammer and tool kit maker, locksmith, goldsmith, sculptor, stone breaker, cobbler, potter, mason, basket/mat/broom maker/coir weaver, traditional Doll & toy maker, barber, garland maker, washerman, tailor and fishing net maker will be covered under the scheme.
- * Aspiration: The scheme will include five lakh families will be covered in the first year of the scheme and 30 lakh families will be covered over five years.



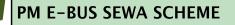
✤ Key points:

- > The artisans and craftspeople will get PM Vishwakarma certificate and ID card, credit support up to Rs.1 lakh (first tranche) and Rs.2 lakh (second tranche) at a concessional interest rate of 5%.
- The scheme will further provide skill upgradation, toolkit incentive, incentive for digital transactions and marketing support.
- ► There will be two types of skilling programmes basic and advanced.
- ► Under the scheme and a stipend of Rs.500 per day will also be provided to beneficiaries while undergoing skill training.
- They will also get a support of up to Rs.15,000 to buy modern tools.

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Vishwakarma Jayanti:

- The day marks the auspicious celebration of the birth of Lord Vishwakarma, who was the son of I ord Brahma
- Factory and store owners perform puja on this day to ask the Lord's favor for success in their respective professions.
- It is celebrated on 17th September every year.



Recently, the Union Cabinet has Context: approved a scheme to add 10,000 e-buses to city bus services across the country, and to shore up urban infrastructure under green mobility initiatives.

An e-bus is any bus whose propulsion and accessory systems are powered exclusively by a zero-emissions electricity source.

About:

- * It will have an estimated cost of Rs.57, 613 crore, of which the Centre will provide Rs.20, 000 crore.
- * It will support bus operations for 10 years.
- * In 169 cities, 10,000 e-buses will be deployed using a public-private partnership (PPP) model and in 181 other cities, infrastructure will be upgraded under the green urban mobility initiatives.
- * The scheme will be implemented in two segments:
 - For cities in the first segment, depot infrastructure will also be developed or upgraded to support the new e-buses, including the creation of behindthe-meter power infrastructure like substations.
 - For those in the second segment, initiatives will focus on bus priority, infrastructure, multimodal interchange facilities, automated fare collection systems, and charging infrastructure.
- Implemented In: Cities with a population of three lakh and above will be covered under the scheme, including all the capital cities of Union Territories, and the northeastern and hill States.

Significance:

* The adoption of electric mobility services will help reduce noise and air pollution in Indian cities and also curb carbon emissions.



- This scheme is also expected to bring in economies of scale for the procurement of electric buses through aggregation.
- * Around 45,000 to 55,000 direct jobs are expected to be generated via the scheme.

Green Mobility and Importance:

- * Green mobility refers to all those mobility options that emit lower emissions - in terms CO2 g/km than pure Internal Combustion Engine vehicles - through the use of alternate fuels, drive-train technologies or other measures;
 - Bio-fuel and Methanol based mobility
 - Compressed Natural gas (CNG) based mobility
 - Electric and Hybrid Mobility (xEV)
 - Hydrogen energy and fuel cell based mobility

Government Initiatives:

- * National Electric Mobility Mission Plan 2020: In 2013, Government of India launched a National Electric Mobility Mission Plan 2020.
 - ▶ It aims to achieve national fuel security by promoting hybrid and electric vehicles in the country.
 - ▶ It targets 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards
- * FAME I (Faster Adoption and Manufacturing of (hybrid &) Electric vehicles in India) : The objective of the scheme to support the hybrid or electric vehicles market development and its manufacturing eco-system in the country in order to achieve selfsustenance in stipulated period.
 - It also seeks to provide demand incentives to electric and hybrid vehicles from two-wheeler to buses.
- Automotive Mission Plan 2026: It aims at making the Indian Automotive Industry among the top three of the world in engineering, manufacture and exports of vehicles & components; growing in value to over 12% of India GDP and generating an additional 65 million jobs.

PRELIMS

- * Green Urban Transport Scheme: Under this scheme, government aims to launch eco-friendly transportation facilities in urban areas
- * India's Electric Vehicle (EV) Mission 2030: Government plans to have an all-electric fleet of vehicles by 2030.

RUSSIA LAUNCHES LUNA-25

Context: The Russian space agency, Roscomos, has successfully launched its first lunar lander in 47 years, marking a significant milestone in its space program.

The

launch

from Russia's

Vostochny

spaceport in the

Far East of the

was part of the

Soviet Union.

What is Luna-25?

- * Objective: There are two primary objectives of the mission;
 - ► to study composition of the polar regolith
 - Luna-25 craft to the to study the plasma moon is Russia's first and dust components since 1976 when it of the lunar polar exosphere
- * These samples are crucial for understanding the lunar environment before potential any base construction.
- * Prime Location: The Luna-25 mission is part of a broader race to explore the lunar South Pole, a region believed to hold coveted pockets of water ice.
- The spacecraft, roughly the size of a small car, will operate for a year on the moon's South Pole.

Why South Pole is so important?

- * Scientists have detected traces of water ice in the region's shadowed craters, making it a prime location for future lunar bases.
- * The discovery of water ice could be historic as it could be used to extract fuel and oxygen, as well as provide drinking water for future lunar inhabitants.
- The mission's success could potentially reshape the 嶶 landscape of lunar exploration in the coming years, placing Russia at the forefront of this new space race.

How other nations are targeting Moon's South Hole?

- * Major Powers such as the United States, China, India, Japan, and the European Union have all been probing the moon in recent years.
- * However, no country has yet made a soft landing on the South Pole. If successful, Luna-25 could potentially make Russia the first nation to achieve this feat.

Will it interfere with Chandrayaan-3?

- * India's Chandrayaan-3, which is also poised for a landing in the same vicinity — the moon's South Polar Region.
- However, the two lunar missions, Luna 25 and Chandrayaan-3, won't interfere with each other, as they have separate landing areas planned.
 - > The Luna 25 mission aims to study the composition of the lunar polar regolith (surface material) and the plasma and dust components of the lunar polar exosphere.
 - Chandrayaan-3 aims to demonstrate a safe and soft landing on the lunar surface, rover mobility, and in-situ scientific experiments.

Other short route missions:

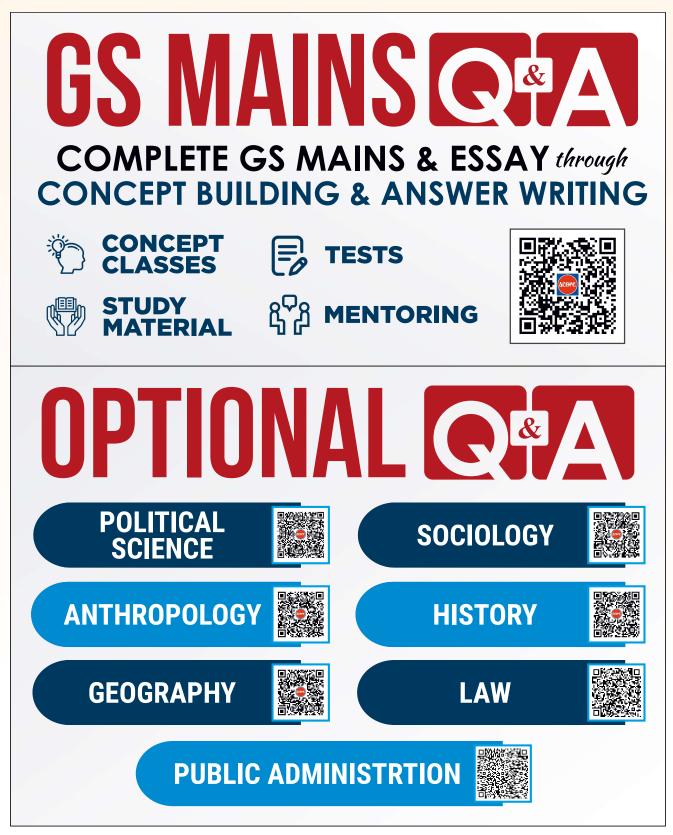
- Luna-25 would not be the first Russian lunar mission to take the short route to the Moon.
- The Soviet Union's Luna-1, the first unmanned mission to reach close to the Moon, took just 36 hours to make the journey.
- China's Chang'e 2, launched in 2010, also took just four days covering the distance between the Earth and the Moon, and so did its follow up mission to the lunar surface, Chang'e 3.
- Apollo-11's command module, Columbia, carrying three astronauts, reached the Moon in just a little over four days.

Why Chandrayaan is taking too long?

- Lack of powerful engine: Because ISRO, unlike the Russians, the Chinese and the Americans, does not have a rocket powerful enough to put Chandrayaan-3 on a direct path to the Moon.
- Also, Chandrayaan-3 is following a very different trajectory: The mission used series of Earth orbits and engine burns to gradually increase the spacecraft's speed and position it for a lunar insertion.







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Section D [QUICK BYTES]

- **vs** Yelagiri hut
- **GS** 'Zayed Talwar' Exercise
- Solution Null Secures 2nd place in NITI Aayog's 'Delta ranking
- **CS** PUSHp portal
- **GS** IMF Quotas
- **OS** Deflation
- **CAS** China's Sponge cities initiative
- **C3** Inclusive Conservation Initiative (ICI)
- **constant of Community reserves**
- **cs** HeLa cells
- **G** Pink bollworm (PBW) Attack
- cs Legionella bacteria
- [PERSONALITY IN NEWS]
- 🛛 Kanaklata Barua & Matangini Hazra
- [LOCATION IN NEWS]
- **GS** Black Sea
- **GS** Sulina Channel



Yelagiri hut



Over 200 **Malaiyali tribespeople** once inhabited traditional clay huts atop Yelagiri hill in northern Tamil Nadu, now replaced by modern homes except for one ancient hut, symbolizing their transition from foraging to modern living.

About Yelagiri hut:

- The hut is formed of red clay on a teak wood structure.
- Made of dry bamboo leaves, the thatched roof is waxed with cow dung to prevent it from leaking during the monsoon season.
- Weatherproofed: A unique feature of the *munn veedu* (mud house) or *andara kotai* (storage facility) is that it stands on a stilt-like structure also made of teak wood.
 - This holds the house two feet above the ground to keep rodents at bay and to prevent the house from flooding during torrential rains.

About Malaiyali tribe:

- The Malaiyali tribe malai meaning "hill" and yali meaning "people" – is strewn across Tamil Nadu's hilly regions.
- The tribespeople were foragers who settled in the upper Nillavur region of Yelagiri and began cultivating its tabletop peak for food.
- Initially living in makeshift huts, they found a permanent solution in the red loam clay abundant in the hills and constructed simple one-room structures that measured 16 by 22 feet.

'Zayed Talwar' Exercise



Indian Navy and United Arab Emirates conducted bilateral exercise 'Zayed Talwar.'

About:

• The exercise aims to share best practices and increase synergies between the two Navies.

India and the UAE established diplomatic relations in 1972 and UAE opened its Embassy in Delhi in 1972 whereas, India opened its Embassy in Abu Dhabi in 1973.

• This exercise will boost the maritime partnership between the two navies and foster a common understanding of the security challenges in the region.

Nuh secures 2nd place in NITI Aayog's 'Delta ranking'

Haryana's Nuh district has achieved the second position in Niti Aayog's **'Delta ranking'** under the aspirational districts programme.

About Aspirational Districts Programme:

Launched in: 2018



CURRENT AFFAIRS

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• The Aspirational Districts Programme is part of the government's endeavour to raise the standard of living of its citizens and ensure inclusive development for all under the vision of **'Sabka Saath Sabka Vikas'**.

- **Objective:** to give benefits to the people by making large-scale improvements in health and nutrition, education and agriculture and water resources etc.
- **Delta Ranking:** The Delta rankings measure the incremental progress made by them across the developmental areas of health and nutrition, education, agriculture and water resources, financial inclusion and basic infrastructure.

PUSHp portal



to provide suggestions for offering incentives to **buyers** and sellers on the surplus power portal, '**PUSHp**', to encourage wider participation, which has been found missing.

The National Power Committee (NPC) has asked States

About the initiative:

- High Price Day Ahead Market and Surplus Power Portal (PUShP) aims to ensure greater availability of power during the peak demand season.
- The portal is a **national-level generating capacity utilisation mechanism** to help States, which are facing power cuts.
- The tariffs are regulated and determined by the concerned regulatory commissions.

IMF Quotas



Reserve Bank Governor Shaktikanta Das pitched for the "expeditious completion" of the **16th general review of the quotas at the International Monetary Fund (IMF)**, pointing out that the same can help the multilateral lender assist distressed countries in a better way.

What are IMF Quotas?

- The IMF Quotas are the building blocks of the IMF's financial and governance structure.
- An individual member country's quota broadly reflects its relative position in the world economy.
- Quotas are denominated in **Special Drawing Rights** (**SDRs**), the IMF's unit of account.
- The IMF's Board of Governors conducts general quota reviews quotas at least every five years.
- The two main issues addressed in a general review of quotas are the
 - ► size of an overall quota increase
 - distribution of the increase among the members
- **Quota Formula:** A quota formula is used to help assess members' relative position in the world economy and it can play a role in guiding the distribution of quota increases.
 - The current formula was agreed to in 2008.



Deflation



China reported "deflation" in July.

What is Deflation?

- Deflation is when the **general price levels** in a country are falling—as opposed to inflation when prices rise.
- Deflation can be caused by **an increase in productivity**, a decrease in overall demand, or a decrease in the volume of credit in the economy.
- Most of the time, deflation is unambiguously a positive trend for the economy, but it can also under certain conditions occur along with a contraction in the economy.
- In an economy dominated by **debt-fuelled asset price bubbles**, deflation can lead to a temporary financial crisis and a period of liquidation of speculative investment known as **debt deflation**.

China's Sponge cities initiative



China has been hit by devastating floods recently, inundating cities and causing infrastructural damage, as well as raising questions about the effectiveness of its 2015 **"sponge city**" initiative aimed at reducing urban flood risks.

About Sponge cities initiative:

- The "sponge city" initiative was designed to make greater use of lower-impact "**nature-based solutions**" to better distribute water and improve **drainage and storage**.
- Those solutions included the use of permeable asphalt, the construction of new canals and ponds and also the restoration of wetlands, which would not only ease waterlogging, but also improve the urban environment.
- However, the sponge city infrastructure can only handle no more than 200 millimetres (7.9 inches) of rain per day.

Inclusive Conservation Initiative (ICI)



First phase of implementation highlights importance of Indigenous-led conservation and need for increased funding.

What is ICI?

- The Inclusive Conservation Initiative (ICI)'s goal is to enhance Indigenous Peoples' and Local Communities' (IPs and LCs) efforts to steward land, waters and natural resources to deliver global environmental benefits.
- It is funded by the Global Environment Facility (GEF) and supported by Conservation International and the International Union for Conservation of Nature (IUCN).
- The Inclusive Conservation Initiative (ICI) supports IP and LC-designed and -led activities that protect biodiversity and result in other global environmental benefits.



Community reserves



In a written reply, Rajya Sabha has been told that institutions such as traditional village durbars in Meghalaya play a vital role in Meghalaya's society and economy, inter alia environmental conservation and raising awareness about sustainable practices. Government of Meghalaya has already notified several sacred forests as **Community Reserves under Wildlife (Protection) Act, 1972.**

What are Community Reserves?

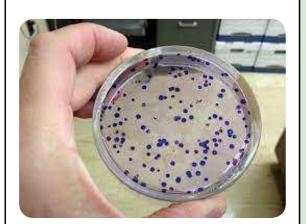
- Community reserves fall under protected areas, along with marine protected areas, national parks, wildlife sanctuaries and conservation reserves, according to the Wild Life (Protection) Act (WLPA), 1972.
- Conservation reserves and community reserves are protected areas of India which typically act as buffer zones between established national parks, wildlife sanctuaries and reserved and protected forests of India, according to the Union Ministry of Environment, Forests and Climate change (MoEFCC).
- These protected area categories were first introduced in the Wild Life (Protection) Amendment Act of 2002 the amendment to WLPA, 1972.
- The provisions of the **WLPA** apply to an area once it has been declared a community reserve.
- Section 33 of the WLPA passes the authority of the sanctuary to the chief wildlife warden.

HeLa cells

The **estate of Henrietta Lacks** filed a lawsuit in Maryland federal court accusing biopharmaceutical company Ultragenyx Pharmaceutical (RARE.O) of unlawfully profiting from **cells (HeLa cells)** that were taken from Lacks' body without her consent during a medical procedure in 1951.

What are HeLa cells?

- HeLa cells are a **type of immortal human cell line** that were the first to be successfully cultured and continuously propagated outside the human body.
- These cells were derived from a **cervical cancer biopsy** taken from **Henrietta Lacks**, an African-American woman, in 1951.
 - ► The name "HeLa" is derived from the first two letters of her first and last names.
- HeLa cells have been widely used in scientific research, including cell biology, genetics, virology, and drug testing.
- They have contributed to a multitude of medical advancements, such as the development of the polio vaccine, understanding cancer, and various other scientific breakthroughs.
- HeLa cells are known for their ability to divide and multiply rapidly, making them an invaluable resource in laboratories worldwide.





Pink bollworm (PBW) Attack

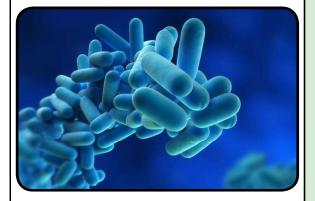


The cotton crop in North India is under the **threat of pink bollworm (PBW)** attacks and the intensity of pest attacks is seen higher this year.

What is **PBW**?

- Pink bollworm (*Pectinophora gossypiella*), armyworm (*Spodoptera littoralis*), cotton bollworm (*Helicoverpa armigera*) and spotted bollworm (*Earias insulana*) are the major pests that limit cotton production around the globe.
- The pink bollworm (*Pectinophora gossypiella*) is one of the world's most destructive pests of cotton.
- This invasive lepidopteran occurs in nearly all cottongrowing countries.
- The origin of this invasive lepidopteran pest is not known, but a leading candidate is India where it was first discovered damaging cotton in **1843**.
- It has also been hypothesised to have originated in **Australia** or **South East Asia**.

Legionella bacteria



Deadly bacteria outbreak forces all migrants off Bibby Stockholm barge after four days.

About legionella bacteria:

- The legionella bacteria occur in rivers and ponds, but only tend to cause problems in water systems where the temperature is right for them to proliferate.
 - Such settings can include hot tubs, showers and air conditioners.
- If people inhale **small droplets of water containing the bacteria**, they can contract **Legionnaires' disease**, a type of severe pneumonia.
- While this can be treated with antibiotics, it can lead to lung failure and even death.
- **Symptoms** include a cough, shortness of breath, a high temperature, flu-like symptoms and chest pain or discomfort.
- Legionella bacteria can also cause Pontiac fever, a mild flu-like illness.

PERSONALITY IN NEWS

Kanaklata Barua & Matangini Hazra

President **Droupadi Murmu** in her speech on the eve of Independence Day hailed the contribution of women freedom fighters and remembered the contributions of **Kanaklata Barua and Matangini Hazra.**

About Kanaklata Barua (1924-42):

- Kanaklata Barua was born on 22 December 1924 in Assam's Barangabari village.
- Barua initially wanted to join Netaji Subhas Chandra Bose's Azad Hind Fauj.
- However, her status as a minor excluded her from joining.
- Barua then joined the Mrityu Bahini group.





- Though the Mrityu Bahini had a similar policy of not allowing minors, Barua managed to persuade them to allow her to join and was even put in charge of the cadre.
- On 20 September, 1942, Barua, aged just 17, led a group of 5,000 freedom fighters on a march towards Gohpur Police station to hoist the Tricolour in support of the Quit India Movement.
- British forces at the station then opened indiscriminate fire on the group.
- Barua, who was at the forefront of the procession, was shot dead at point-blank range.

Matangini Hazra (1870-1942):

- Matangini Hazra's active role was in the Civil Disobedience Movement, participation in the Salt March, and her instrumental role in the Quit India Movement highlights her commitment.
- Her ultimate sacrifice while leading a procession to seize a police station demonstrated her unyielding spirit.

LOCATION IN NEWS

Black Sea



Russia opens fire on cargo vessel in Black Sea.

About Black Sea:

- Black Sea, an inland sea between Eastern Europe and Western Asia.
- It is bounded by the **Eastern European Plain** to the north, the **Balkans** to the west, the **Caucasus Mountains** to the east, and the **Anatolian Peninsula** (or Asia Minor, the largest part of Turkey) to the south.
- There are six countries with coastlines on the Black Sea (clockwise), Ukraine, Russia, Georgia, Turkey (Türkiye), Bulgaria, and Romania.

Sulina Channel



A **new trade route** to support black grain initiative, has been identified i.e. **the Sulina Channel** – a 63 km long distributary of the Danube, connecting major **Ukrainian ports** on the river to the Black Sea, lying completely within the **borders of Romania, a NATO member**.

About:

- Location: Sulina is situated at the mouth of River Danube, 148km E of Constanta.
- The Danube is the second-longest river in Europe, after the Volga in Russia.
- It flows through much of Central and Southeastern Europe.
- **General overview**: Depths in the canal range from 10m to 14m, permanent dredging allows vessels of max draft 7.32m to berth.

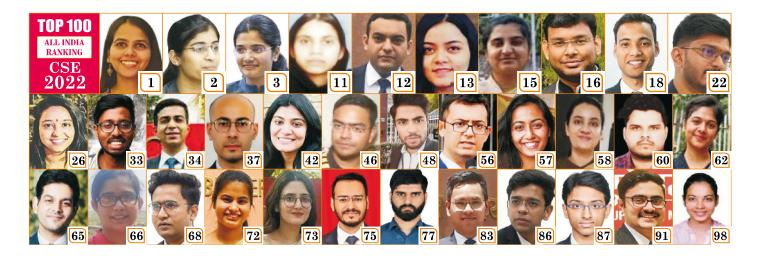
Location near Black sea:

 The Danube–Black Sea Canal is a navigable canal in Romania, which runs from Cernavodă on the Danube River, via two branches, to Constanța and Năvodari on the Black Sea.









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