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By



SOURCES



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Important News Articles

GS II

1. Omnibus Telecom Bill in Lok Sabha, legislation to streamline regulation - The Hindu/ Telecom Bill paves way for allocation of satellite spectrum - Indian Express

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- The Union Minister tabled the **Telecommunications Bill, 2023** in Lok Sabha amid sloganeering by opposition in the house.

Key Points

- The bill empowers the government to **suspend or prohibit use of telecom equipment** from countries or a person as may be notified in case of national security.
- Telecom equipment needs to be **procured from trusted sources** only.
- To protect telecom consumers, the bill proposes that **prior consent** should be taken for **receiving certain messages** such as promotional, advertising, etc.
- The bill proposes to have an **adjudicating mechanism** in place.
- In case of any breach of terms and conditions of the licence, the adjudicating officer should pursue an inquiry and pass an order.
- The bill is also likely to grant powers to the **Telecom Regulatory Authority of India (TRAI)** to **probe predatory pricing** and take required action.
- The bill is likely to **replace three laws viz.**
 - The Indian Telegraph Act, 1885
 - The Indian Wireless Telegraphy Act, 1933
 - The Telegraph Wires (Unlawful Possession) Act, 1950
- Over-the-top (OTT) players or apps**, have been **removed** from the definition of telecommunication services in the bill.
- The government has proposed **administrative allocation of spectrum** for satellite services.
- The global **mobile personal communication by satellite** (GMPCS) has been incorporated under the first schedule,
 - wherein **spectrum will be assigned administratively.**

Prelims Takeaway

- Over-the-top Platforms
- Telecom Regulatory Authority of India (TRAI)
- Global mobile personal communication by satellite

2. Far fewer CAG audits of Centre tabled in Parliament - The Hindu

Relevance: Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

News:

- In 2023, only 18 audits of the Union government by the **Comptroller and Auditor General (CAG)** were tabled in Parliament.
- Declining trend in the number of audits** tabled in Parliament in recent years.

Prelims Takeaway

- Comptroller and Auditor General
- Budget

Audit Reports in Parliament: A Decreasing Trend

- Between 2019 and 2023, an **average of 22 audit reports** were **tabled each year**, compared to 40 reports between 2014 and 2018.
- Peak in 2015 with 53 reports**, but four of the last six years witnessed 20 or fewer reports being tabled.

Department-Wise Analysis

- Similar **declining trend** observed across departments, e.g., Railways Department and Civil Department.
- The **Railways Department** experienced a **decrease from 27 to 14 audit reports** in the last five years.
- The **Civil Department** had **34 reports** in the last five years, **down from 42** in the previous period.
- **Limited accessibility to Defence Department** reports, possibly due to security concerns.

CAG and IA&AD Staff Reduction

- The Indian Audit and Accounts Department (IA&AD) **staff strength declined** to 41,675 in 2021-22 from the peak of 48,253 in 2013-14.

Budget Allocation Decline

- Budget allocated to the IA&AD as a share of the Union **Budget's total expenditure decreased** to 0.13% in FY24 from 0.19% in FY17.

3. OBC representation in AIIMS faculty low, says House panel - The Hindu

Relevance: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

News:

- **Shortage in OBC representation in faculty** posts in AIIMS Delhi & seven others in different states was observed due to non availability of suitable candidates.

Prelims Takeaway

- Parliamentary Committee
- OBC Reservation

Key Points

- A parliamentary panel has recommended the government make provision for **reservation for OBCs** in admission in **super specialty courses** to
 - Increase availability of qualified faculty in future.
- **The committee on welfare of OBCs** led by BJP Lok Sabha MP in its report presented in Parliament recommends that all possible avenues may be looked into
- As of now there is **reservation for admission** in undergraduate (**MBBS**) and PG courses (**MS/MD**) only in medical educational colleges.
- There is **no reservation for admissions in super specialty courses** in medical educational colleges/institutions.
- Eligible candidates from **reserved categories** with higher qualifications are **not available to fill vacant** faculty positions.

GS II

4. On PSU capex push: Oil, highways, rail set the pace; steel, green power trail - Indian Express

Relevance: Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

News:

- Public sector **oil and gas companies** in India are **ahead in achieving their cumulative capital expenditure** (capex) targets for the current financial year ending March (FY24).

Prelims Takeaway

- Renewable energy
- Capex

Key Points

- In the first eight months of FY24, 10 oil and gas **PSUs achieved 76.6% of their cumulative capex target** of Rs 1.07 lakh crore, spending Rs 81,828 crore.
- **The focus on capacity expansion** in exploration, production, refining, petrochemicals, fuel retail, and gas infrastructure aims to meet the country's rising energy demand.

Government's Emphasis on Capex

- **Increasing government capex** is a crucial strategy **to stimulate economic growth** and attract private sector investment.

Comparison Across Ministries

- The **petroleum ministry ranks third** in terms of PSU capex targets, with the railway and roads transport and highways ministries leading.
- Only the **shipping ministry exceeds the petroleum ministry** in percentage achievement, with Cochin Shipyard achieving 87.6% of its Rs 300 crore capex target.

Challenges in Other Infrastructure Ministries

- Ministries like **renewable energy, steel, and power face challenges** in meeting their capex targets.
- Solar Energy Corporation of India (SECI) **achieved only 14.2%** of its Rs 2,051 crore capex target by November.

5. Afghanistan, left out of COP-28, hopes for inclusion in COP-29- The Hindu

Relevance: Conservation, environmental pollution and degradation, environmental impact assessment.

News:

- **Afghanistan**, highly vulnerable to climate change, was **omitted from the COP-28** climate summit for the third consecutive year.

Prelims Takeaway

- Green Climate Fund
- UNFCCC

Key Points

- **Exclusion follows the Taliban's takeover of Kabul in 2021**, with no formal recognition from foreign governments and no seat at the U.N. General Assembly.

Reasons for Exclusion

- **Taliban's restrictions on women**, particularly the ban on girls and women from high school and universities, cited as the primary reason for international isolation.
- **Lack of recognition** of the **Taliban leadership** by any foreign government contributes to Afghanistan's exclusion from UN talks.

UNFCCC Decision and Taliban Response

- The UNFCCC COP Bureau **deferred a decision on Afghanistan's representation** at the November 2022 meeting.

Impact on Women and Food Insecurity

- Women, constituting a significant portion of the 20 million Afghans **facing severe food insecurity**, are adversely affected.

Climate Funds and Projects on Hold

- Taliban-led Afghanistan **unable to access key UN climate funds**, including the Green Climate Fund (GCF).
- **GCF had approved nearly \$18 million** for a sustainable energy project **before the Taliban takeover**, now on hold for risk review.

6. Scientists find hydrogen cyanide, key molecule for life formation, in Saturn's icy moon Enceladus - The Print

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

News:

- Scientists analyzing data from **NASA's Cassini spacecraft** have discovered **hydrogen cyanide** in the oceans of Saturn's icy moon, **Enceladus**.

Prelims Takeaway

- Cassini Spacecraft
- Enceladus
- Hydrogen Cyanide

Cassini Spacecraft

- Launched by NASA in 1997, it orbited Saturn from 2004 to 2017.
- Measured the structure of Saturn's atmosphere and rings, as well as how they interact with the planet's moons.
- Discovered six named moons and revealed Enceladus and Titan as promising locations to search for extraterrestrial life.

Enceladus

- Enceladus, one of Saturn's moons, features a **white, streaky surface** made of **water ice**.
- Beneath the frozen crust lies a **warmer, salty ocean** covering the entire moon.

- The moon is characterized by its **active water volcanism**, where plumes of water, ice, dust, and gases are ejected into space, contributing to the **replenishment of one of Saturn's rings**.

Significance of Findings

- Detection of hydrogen cyanide, along with other compounds like methanol, ethane, and oxygen, indicates a more **diverse** and **dynamic ocean chemistry**.
- The presence of hydrogen cyanide suggests the **existence of unidentified energy sources** within the moon.
- It indicates the potential for **more powerful energy processes** than those associated with previously detected biosignature molecules like methane.
- Higher energy levels can contribute to the formation of complex and versatile molecules, playing a role in the **origins of life**.

Implications for Habitability

- The presence of organic molecules and hydrogen cyanide strengthens the case for **Enceladus's habitability**.
- The moon's oceans are known to contain **essential compounds for life**, and the discovery adds evidence supporting its potential to host life.
- The study suggests that Enceladus meets **basic requirements for habitability** and may have the necessary elements for the **formation of complex biomolecules**.
- Future Studies** are expected to provide more detailed information about the **moon's composition** and **current conditions**.

7. Centre launches forest certification scheme to counter foreign agencies - Indian Express

Relevance: Conservation, environmental pollution and degradation

News:

- Amid global concerns about **deforestation** and **illicit timber trade**, the Indian government has launched its **own certification scheme**.
- The **Indian Forest and Wood Certification Scheme (IFWCS)** aims to validate entities **adhering to sustainable practices** in forest management and product production.

Prelims Takeaway

- Indian Forest and Wood Certification Scheme
- Glasgow Climate Change Conference

Background

- Private foreign certification agencies** have been operating in the Indian market for two decades.
- However, **concerns about their integrity** were raised in a global investigation by the International Consortium of Investigative Journalists (ICIJ).
- The government's move to establish its certification scheme follows these concerns and the need for **improved market regulation**.

Development of New Standards

- New standards** for forest management have been developed, encompassing **eight criteria**, 69 indicators, and 254 verifiers.
- These standards are **mandatory for all forest divisions** in the country, providing a basis for the IFWCS.
- While **obtaining certification is not mandatory** for forest divisions, adherence to the standards makes them eligible.
- The certification scheme is expected to **enhance trust, transparency** and **international acceptance** of Indian forest-based products.

Scope of IFWCS Certification

- It will offer certification for **ensuring traceability of forest products** throughout the supply chain for
 - sustainable forest management
 - management of trees outside forests (e.g. plantations)
 - chain of custody
- **Caters to various entities** such as forest management units, corporations, wood-based industries, tree growers, traders, saw millers, exporters and importers of wood-based and non-timber forest products.

International Context

- Given that Europe and the US are **major export markets** for India's forest-based products, the IFWCS is crucial.
- **Tightening import rules** in these markets, driven by **concerns about deforestation and climate change**, underscore the need for reliable certification.
- The global commitment at the Glasgow climate change conference in 2021 to **halt and reverse deforestation by 2030** adds urgency to India's efforts in sustainable forest management.

**Mentorship**
India

Editorials, Gists and Explainers

1. Grass-root democracy as a bulwark against Maoists - The Hindu

Relevance: Linkages between development and spread of extremism.

News:

- The recently concluded Assembly elections in Chhattisgarh were **influenced significantly by tribal votes**, constituting 34% of the state's electorate.
- The political party aligned with the tribal vote traditionally forms the government, making tribal support crucial.

<p style="text-align: center;">Maoist Insurgency in Chhattisgarh</p> <ul style="list-style-type: none"> • Chhattisgarh's tribal regions, particularly Bastar, are affected by Maoist insurgency. • Maoists operate in Schedule Five areas, often leading to violence and low voter turnout during elections. • The Maoist insurgency poses a challenge to democratic processes in the region. <p style="text-align: center;">Low Voter Turnout in Maoist-Affected Areas</p> <ul style="list-style-type: none"> • Media reports indicate extremely low voter turnout (3-4%) in Maoist-affected areas like Bijapur and Konta. • This raises concerns about the democratic process in regions where Maoists call for election boycotts, reflecting potential disillusionment among the electorate. <p style="text-align: center;">Challenges Faced by Democracy in Maoist Regions</p> <ul style="list-style-type: none"> • Maoists, advocating for the people's cause, paradoxically discourage democratic participation of locals. • Efficacy of Maoists' claims is questioned as they hinder the empowerment of the people they claim to represent. 	<p style="text-align: center;">Election Issues and Tribal Aspirations</p> <ul style="list-style-type: none"> • Religion-based conversions emerged as a dominant election issue. • However, it is viewed as a manufactured agenda to divert attention from core issues. • Tribals increasingly demand their constitutional rights, evident in movements like Pathalgadi in Jharkhand, where they assert their rights for dignity. <p style="text-align: center;">Role of PESA Act in Empowering Tribals</p> <ul style="list-style-type: none"> • The implementation of the Provisions of the Panchayats (Extension to Scheduled Areas) Act (PESA) since its enactment in 1996 has been incomplete. • Proper execution of PESA could empower gram sabhas, aligning with tribal traditions and potentially mitigating Maoist influence by addressing tribal aspirations. <p style="text-align: center;">Nurturing Tribal Leadership</p> <ul style="list-style-type: none"> • Empowering democracy at the grassroots level is seen as a crucial step in countering Maoist influence. • Following could contribute in resolving the Maoist challenge beyond just security and development measures. <ul style="list-style-type: none"> ◦ Acknowledging and nurturing tribal leadership ◦ Providing a voice to tribal communities ◦ Recognizing their aspirations • There is a need for a holistic, long-term approach to address the underlying issues and aspirations of tribal populations.
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2. Customised mRNA is the next frontier in personalised medicine - The Hindu

Relevance: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Context:

- While **using mRNA as medicine** is a recent development, mRNA has always been **present in the body**.
- mRNA serves as instructions for the **creation of specific proteins**.
- The understanding of **how mRNA functions** at the **cellular level** laid the groundwork for the development of **mRNA medicines**, such as **COVID-19 vaccines**.

<p style="text-align: center;">Function of mRNA in Cells</p> <ul style="list-style-type: none"> • DNA contains the genes for making proteins and cells create mRNA copies of these genes, acting as messengers with instructions for protein synthesis. • The mRNA language consists of four building blocks (nucleotides), and mutations in DNA can lead to disease-causing errors in critical proteins. <p style="text-align: center;">Benefits of mRNA as Medicine</p> <ul style="list-style-type: none"> • The mRNA can be manipulated to create medicines for various cellular issues. • Scientists can easily generate genes for different proteins; edit them to meet patient needs, and produce scalable amounts of mRNA in the lab. • The temporary nature of mRNA allows for easy dosage adjustments. 	<p style="text-align: center;">mRNA Vaccines for COVID-19</p> <ul style="list-style-type: none"> • The COVID-19 vaccines from Moderna and Pfizer-BioNTech are the first mRNA-based medicines to gain FDA approval. • These mRNA vaccines demonstrate the flexibility of mRNA-based therapies. • They work by instructing cells to produce the spike protein of the virus, training the immune system to recognize and combat it. • Booster shots can be adapted to address new viral variants. <p style="text-align: center;">Beyond Vaccines: mRNA Treatments</p> <ul style="list-style-type: none"> • Clinical trials are underway for mRNA-based vaccines targeting diseases like seasonal flu, herpes, and respiratory syncytial virus. • mRNA is also explored as a treatment for cancer, functioning like a vaccine to train the immune system to target cancer cells. • Personalized cancer vaccines tailored to a patient's specific mutations are also being studied.
<p>Future Applications</p> <ul style="list-style-type: none"> • Researchers are investigating mRNA's potential to treat various diseases, including heart disease, neurodegenerative conditions, and bone loss. • The adaptability of mRNA allows for customized therapies with fewer side effects, offering hope for diverse applications in protein replacement therapies. 	

3. India's first winter of Arctic research: why it matters - Indian Express

Relevance: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Context

- **India** is all set to launch its **first-ever winter expedition** in the **Arctic**.
- With this, India's **Himadri** will be only the **fourth** research station in the Arctic to be **manned year-round**.
- **Objective:** To study the impact of climate change in the Arctic region and address challenges related to the environment.

Importance of Arctic Studies

- The Arctic, situated above the Arctic Circle, has far-reaching effects on global climate due to rising temperatures and declining sea ice extent.
- Potential consequences include rising sea levels, altered atmospheric circulations, and shifts in weather patterns, impacting regions far beyond the Arctic.

Challenges in Arctic Exploration

- **Environmental challenges:** Extreme cold temperatures limit scientific activities to the summer months.
- **Geopolitical tensions and limited space for research stations** due to multiple state jurisdictions.

India's First Winter Expedition

- A team of four scientists will embark on India's inaugural winter expedition funded by the Ministry of Earth Sciences.
- **Research Areas:** atmospheric sciences, astronomy, astrophysics, and climate studies.
- Team will be stationed at Himadri, India's sole research station in Ny-Ålesund, specially equipped for polar night observations.

Evolution of India's Arctic Interests

- India signed the Svalbard Treaty in 1920, enabling operations in the Svalbard archipelago.
- Significant steps include
 - establishment of Himadri (2008)
 - release of India's Arctic Policy (2022)
 - Focus: science, research, environmental protection, economic development, transportation, governance and international cooperation.

Global Arctic Research

- Ny-Ålesund, with research stations from ten countries, is a hub for Arctic research.
- Only three stations have year-round human presence.
- India's involvement in international committees and organizations demonstrates its commitment to Arctic studies.

Conclusion

- India's winter expedition signifies a **proactive approach to Arctic research**.
- It contributes to global scientific efforts in a region crucial for understanding and mitigating climate-related challenges.



Quick Look

1. JN.1 Virus

- Recently a case of the JN.1 subvariant of COVID-19 has been identified in Kerala during the continuous routine surveillance conducted by INSACOG.
- The JN.1 virus is a novel variant of Omicron subvariant BA.2.86 (called Pirola) with an additional spike protein mutation.
- It has the capability to spread rapidly and evade immunity, highlighting the need for continued monitoring and caution.
- Symptoms: fever, runny nose, sore throat, headache and mild gastrointestinal symptoms.

2. National Green Tribunal (NGT)

- A specialised body set up under the National Green Tribunal Act (2010).
- Objective: Effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- With NGT, India became the third country to set up a specialised environmental tribunal, only after Australia and New Zealand
- NGT is guided by the principles of 'natural justice'.
- Mandated to make disposal of applications or appeals finally within 6 months of filing the same.
- An order/decision/award of Tribunal is executable as a decree of a civil court.
- An appeal against NGT lies to the Supreme Court, generally within ninety days from the date of communication.
- The NGT deals with civil cases under the seven laws related to the environment, these include:
 - The Water (Prevention and Control of Pollution) Act, 1974,
 - The Water (Prevention and Control of Pollution) Cess Act, 1977,
 - The Forest (Conservation) Act, 1980,
 - The Air (Prevention and Control of Pollution) Act, 1981,
 - The Environment (Protection) Act, 1986,
 - The Public Liability Insurance Act, 1991 and
 - The Biological Diversity Act, 2002.

3. Sargasso Sea

- Located entirely within the Atlantic Ocean, it is the only sea without a land boundary.
- Named for Sargassum, a holopelagic, golden drift algae that can aggregate to form extensive floating mats on the surface of the ocean.
- This extraordinary open-ocean ecosystem is bounded by currents circulating around the North Atlantic subtropical gyre.
- It is unique for supporting the centre of distribution and abundance for a community of continuously pelagic drift algae.
- The Gulf Stream establishes the Sargasso Sea's western boundary, while the Sea is further defined to the north by the North Atlantic Current, to the east by the Canary Current, and to the south by the North Atlantic Equatorial Current.
- Provides habitats, spawning areas, migration pathways and feeding grounds to a diverse assortment of flora and fauna.
- The Sargasso Sea is warmer, saltier and more acidic than it has ever been since measurements began in 1954.

4. The Anti-Defection Law

- The Anti-Defection Law passed in 1985 through the 52nd amendment added the Tenth Schedule to the Indian Constitution.
- It aimed to combat "the evil of political defections".

- According to it, a member of a House belonging to any political party becomes disqualified, if
 - he voluntarily gives up his membership of such political party
 - he votes or abstains from voting in such House contrary to directions issued by his political party and such act has not been condoned by the party
 - If any independently elected member joins any political party.
 - If any nominated member joins any political party after the expiry of six months.
- Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.
- Exceptions
 - If a member goes out of his party as a result of a merger of the party with another party.
 - If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or rejoins it after he ceases to hold that office.

5. Direct Tax

- A direct tax is one that is levied directly on the taxpayer and paid directly to the government by those who are subjected to it.
- The Central Board of Direct Taxes is responsible for levying and collecting direct taxes as well as formulating other direct tax policies.
- A taxpayer pays a government a direct tax for a variety of reasons, such as real property tax, personal property tax, income tax or asset taxes, Gift Tax, Capital Gains Tax, and so on.
- Direct Tax is one of the two main sources of revenue for the government. The indirect tax is the other.
- Every fiscal year, direct taxes account for roughly half of the government's revenue.
- To increase revenue, the government sets direct tax collection targets for each fiscal year.

6. The Pradhan Mantri Schools for Rising India (PM-SHRI) Yojana

- It is a centrally sponsored scheme for upgradation and development of more than 14500 Schools across the country.
- It aims at strengthening the selected existing schools from amongst schools managed by Central Government/ State/ UT Government/ local bodies.
- It will showcase all components of the National Education Policy 2020 and act as exemplar schools and also offer mentorship to other schools in their vicinity.

Mentorship
India

Prelims Track Question

Q1. Consider the following statements regarding OTT:

1. OTT refers to a delivery system that provides streaming content directly over the internet, bypassing traditional distribution methods like cable or satellite television.
2. Governments worldwide have faced challenges in regulating OTT platforms due to their borderless nature.

Which of the statements given above is/are incorrect?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Q2. Consider the following statements regarding the CAG:

1. The CAG is appointed by the President of India and holds office for a term of six years or until reaching the age of 65, whichever comes earlier.
2. The CAG enjoys financial independence as the salaries and allowances are charged on the Consolidated Fund of India
3. Apart from auditing the accounts of the Union and State governments, the CAG also audits the accounts of public corporations and other authorities as specified by the President.

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

Q3. Consider the following statements regarding Parliamentary Committees:

1. The Committees consist only of Members of Parliament (MPs) from the Lok Sabha, and Rajya Sabha members are not eligible for committee membership.
2. The primary function of the Committees is to assist in the legislative process by scrutinising bills and proposing amendments

3. The Committees, once formed, operate independently of the government and are not bound by the executive's directions.

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

Q4. Capital Expenditure (Capex) is a significant aspect of economic planning. Consider the following statements regarding Capex:

1. It refers to short-term investments made by companies to acquire or upgrade long-term assets, such as machinery, buildings, and technology, aiming to enhance productivity and future growth.
2. The level of Capex in an economy is a crucial indicator of its investment climate, economic health, and the government's commitment to infrastructure development.
3. It is typically financed through operational revenues, and borrowing is seldom utilized, as it may strain the financial stability of the company or government.

How many of the statements given above is/are correct?

- A. Only one
- B. Only two
- C. All three
- D. None

Q5. Consider the following statements

1. The U.N. Framework Convention on Climate Change (UNFCCC)'s COP Bureau deferred a decision on Afghanistan's representation at future annual summits.
2. Taliban-led Afghanistan unable to access key U.N. climate funds, including the Green Climate Fund (GCF).

Which of the statements given above is/are correct?

- A. Only 1
- B. Only 2

- C. Both 1 and 2
D. Neither 1 nor 2

Q6. Consider the following statements with reference to Cassini Spacecraft

1. It was launched by ROSCOSMOS to measure the structure of Saturn's atmosphere and rings, as well as how they interact with the planet's moons.
2. The recent study based on Cassini spacecraft's data confirmed the presence of hydrogen cyanide in Titan's oceans.

Which of the statements given above is/are correct?

- A. Only 1
B. Only 2
C. Both 1 and 2
D. Neither 1 nor 2

Q7. Consider the following statements with reference to the Indian Forest and Wood Certification Scheme

1. It has been introduced by the MoEFCC to promote sustainable management of forests and trees outside forests.
2. It offers voluntary third-party certification to encourage sustainable forest management and agroforestry.
3. It is based on the Indian Forest Management Standard, which includes 12 criterias divided in 4 categories.
4. The Quality Council of India will manage the scheme.

How many of the statements given above is/are correct?

- A. Only one
B. Only two
C. Only three
D. All four

Q8. With reference to the PESA Act, 1996, consider the following statements

1. The Act extended the provisions of Panchayats to the tribal areas of Fifth Schedule states.
2. It gives special powers to the Gram Sabhas in Scheduled Areas, especially for managing natural resources.

Which of the statements given above is/are correct?

- A. Only 1
B. Only 2
C. Both 1 and 2
D. Neither 1 nor 2

Q9. Consider the following statements regarding mRNA

1. mRNA is involved in the synthesis of proteins within cells.
2. mRNA is a permanent molecule that remains in cells throughout an organism's life.
3. mRNA can be manipulated to create medicines for various diseases, including vaccines.

How many of the statements given above is/are incorrect?

- A. Only one
B. Only two
C. All three
D. None

Q10. Consider the following research stations

1. Himadri
2. Maitri
3. Dakshin Gangotri
4. IndArc

How many of the research stations mentioned above are Indian Arctic research stations?

- A. Only one
B. Only two
C. Only three
D. All four

Prelims Track Answer

Ans. 1 Option D is correct

Explanation

- OTT refers to Over-the-Top, a content delivery system that streams media content directly over the internet, bypassing traditional distribution methods like cable or satellite television.
- Users can access content on-demand, providing flexibility in viewing. **Hence, statement 1 is correct**
- Governments globally have faced challenges in regulating OTT platforms. The borderless nature of the internet makes it challenging to enforce content regulations.
- This has led to ongoing debates about censorship, content ratings, and issues related to national security, as some content can potentially cross international boundaries without restrictions. **Hence, statement 2 is correct**

Ans.2 Option C is correct

Explanation

- The CAG is appointed by the President of India. However, the term of office is not fixed.
- The CAG can hold office until the age of 65, but the term can be shorter if the individual chooses to retire earlier. **Hence, statement 1 is correct**
- The CAG enjoys financial independence as salaries and allowances are charged on the Consolidated Fund of India.
- This ensures autonomy in conducting audits without financial constraints. Removal can only be initiated through impeachment by Parliament, ensuring the CAG's independence. **Hence, statement 2 is correct**
- The mandate of the CAG includes auditing the accounts of the Union and State governments.
- Additionally, the CAG audits the accounts of public corporations and other authorities as specified by the President.

- This broader mandate allows for comprehensive financial oversight. **Hence, statement 3 is correct**

Ans. 3 Option A is correct

Explanation

- Parliamentary Committees consist of Members of Parliament from both the Lok Sabha and the Rajya Sabha.
- Members from both houses participate, contributing to a comprehensive and diverse perspective. **Hence, statement 1 is incorrect**
- While scrutinising bills is one of their functions, Parliamentary Committees also play a crucial role in the oversight of the executive.
- They examine budgetary allocations, government policies, and implementation, ensuring accountability and transparency. **Hence, statement 2 is incorrect**
- Once formed, Parliamentary Committees operate independently. They function free from the government's influence and are not bound by executive directives. This autonomy is vital for ensuring unbiased scrutiny. **Hence, statement 3 is correct**

Ans. 4 Option C is correct

Explanation

- Capex, or Capital Expenditure, involves investments in long-term assets like machinery, buildings, and technology.
- It is aimed at improving productivity, efficiency, and fostering future growth. **Hence, statement 1 is correct**
- Capex is indeed a critical economic indicator.
- The level of capital expenditure reflects the investment climate in the economy, economic health, and the government's commitment to infrastructure development.
- Higher Capex often indicates a positive economic outlook. **Hence, statement 2 is correct**

- Capex can be financed through various sources, including operational revenues and borrowing.
- Many companies and governments use a combination of these sources to fund capital projects.
- Borrowing is a common practice to fund large-scale infrastructure projects. **Hence, statement 3 is incorrect**

Ans. 5 Option C is correct

Explanation

- The U.N. Framework Convention on Climate Change (UNFCCC) COP Bureau deferred a decision on Afghanistan's representation at the November 2022 meeting. **Hence, statement 1 is correct.**
- Women, constituting a significant portion of the 20 million Afghans facing severe food insecurity, are adversely affected.
- Taliban-led Afghanistan unable to access key U.N. climate funds, including the Green Climate Fund (GCF). **Hence, statement 2 is correct.**

Ans. 6 Option D is correct

Explanation

- Cassini Spacecraft was launched by NASA in 1997, it orbited Saturn from 2004 to 2017. **Hence, statement 1 is incorrect.**
- Measured the structure of Saturn's atmosphere and rings, as well as how they interact with the planet's moons.
- Scientists analyzing data from NASA's Cassini spacecraft have discovered hydrogen cyanide in the oceans of Saturn's icy moon, Enceladus. **Hence, statement 2 is incorrect.**
- Detection of hydrogen cyanide, along with other compounds like methanol, ethane, and oxygen, indicates a more diverse and dynamic ocean chemistry.
- It indicates the potential for more powerful energy processes than those associated with previously detected biosignature molecules like methane.
- The study suggests that Enceladus meets basic requirements for habitability and may

have the necessary elements for the formation of complex biomolecules.

Ans. 7 Option B is correct

Explanation

- The Ministry of Environment, Forests, and Climate Change has introduced the Indian Forest and Wood Certification Scheme.
- It is a national initiative aimed at encouraging sustainable forest management and agroforestry practices in India. **Hence, statement 1 is correct.**
- It offers voluntary third-party certification designed to promote sustainable forest management and agroforestry in the country. **Hence, statement 2 is correct.**
- The scheme includes forest management certification, tree outside forest management certification, and chain of custody certification.
- It is based on the Indian Forest Management Standard, which includes 8 criteria, 69 indicators, and 254 verifiers. **Hence, statement 3 is incorrect.**
- It will be overseen by the Indian Forest and Wood Certification Council, which will act as a multistakeholder advisory body.
- Indian Institute of Forest Management, Bhopal will act as the scheme operating agency and will be responsible for overall management of the scheme. **Hence, statement 4 is incorrect.**
- The Quality Council of India will accredit certification bodies to assess adherence to the standards.

Ans. 8 Option C is correct

Explanation

- The Panchayats Extension to Scheduled Areas (PESA) Act 1996 was enacted on 24 December 1996.
- The Act extended the provisions of Panchayats to the tribal areas of Fifth Schedule states. **Hence, statement 1 is correct.**
- The PESA act drew inspiration from the provisions of the 73rd and 74th amendments of the Indian constitution.

- It aimed to provide greater autonomy to the Scheduled areas, which are predominantly tribal in nature, and protect their rights over land and forest.
- The PESA Act gives special powers to the Gram Sabhas in Scheduled Areas, especially for managing natural resources. **Hence, statement 2 is correct.**
- The main rationale behind the Act is to preserve the tribal population from exploitation with the active involvement of the Gram Sabha.

Ans. 9 Option A is correct

Explanation

- While using mRNA as medicine is a recent development, mRNA has always been present in the body.
- However, it is not a permanent molecule; it is synthesized as needed, used in protein synthesis, and then degraded. **Hence, statement 2 is incorrect.**
- mRNA serves as instructions for the creation of specific proteins. **Hence, statement 1 is correct.**

- It carries the genetic information from DNA to the ribosomes, where proteins are synthesized based on the mRNA code.
- mRNA can be manipulated to create medicines, including vaccines.
- This was exemplified by the development of mRNA-based COVID-19 vaccines, such as the Pfizer-BioNTech and Moderna vaccines. **Hence, statement 3 is correct.**

Ans. 10 Option B is correct

Explanation

- India maintains two operational research stations in the Antarctic, Maitri and Bharti, where scientists are doing research.
- Dakshin Gangotri, the first station built before 1985, is now operating as a base transit camp mainly for supplying goods.
- Himadri is India's first permanent Arctic research station located at Spitsbergen, Svalbard, Norway.
- It is located at the International Arctic Research base, Ny-Ålesund.
- IndARC is India's first underwater moored observatory in the Arctic region for climate change studies. **Hence, option B is correct.**

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