

# General Studies

## Current Affair Test (July-2024)

### 1. Ans: (c)

- The RBI has introduced a framework for recognizing Self-Regulatory Organizations (SROs) in the FinTech sector. After releasing a draft framework in January 2024 and gathering feedback, the final framework has been established.
- Definition of FinTech Entities providing technological solutions for delivering financial products or ensuring regulatory compliance, often in collaboration with traditional financial institutions. What are SROs? Self-Regulatory Organization, is an industry-led entity responsible for establishing and enforcing regulatory standards within its sector.

Need of SROs The Self-Regulatory Organization Framework for FinTech Firms (SROFT) ensures adherence to industry standards and best practices while empowering FinTech firms to operate responsibly, even in the absence of formal regulations. Additionally, it fosters collaboration among stakeholders to identify and address challenges, promoting an environment conducive to innovation.

### 2. Ans: (c)

- S1 is Correct - The NSE is the largest stock exchange in India in terms of total market capitalization, often surpassing the Bombay Stock Exchange (BSE).
- S2 is Correct - The NSE was established in 1992 and started its trading operations in 1994.
- S3 is Correct - The NSE introduced electronic screen-based trading in India, which was a significant shift from the traditional open outcry system.

### 3. Ans: (c)

- The Reserve Bank of India's (RBI) variable rate repo (VRR) auction attracted significant interest from banks, with bids totalling 1,13,915 crore, surpassing the RBI's offer of 50,000 crore. This underscores the growing demand for liquidity in the banking sector amid an estimated deficit of around 1.54-lakh crore.
- **What is VRR, or Variable Rate Repo?**
  - ♦ It is a mechanism where the RBI permits banks to borrow funds at rates determined by the market, differing from the fixed Repo Rate at which banks borrow directly from the RBI.
  - ♦ Typically lasting up to 14 days, VRR serves as a means to inject short-term liquidity into the banking system. Conversely, Variable Rate Reverse Repo (VRRR) is employed to absorb

surplus liquidity from the system.

### 4. Ans: (c)

- Foreign Direct Investment (FDI) inflows into India fell 3.5% to \$44 billion in FY24 due to reduced investments in services, telecom, and pharma sectors.
- FDI is not permitted in firms engaged in or attempting to engage in the real estate industry, farmhouse construction, or trading in transferable development rights.
- **About FDI**
  - ♦ Definition: Investment by a company or individual in one country into business interests in another country.
  - ♦ Policy: Formulated by the Department for Promotion of Industry and Internal Trade (DPIIT).
- **Routes:**
  - ♦ Automatic Route: No government approval is required.
  - ♦ Government Route: Approval required.
  - ♦ Inclusions: Foreign Currency Convertible Bonds, Foreign Institutional Investment (with conditions), and Global Depository Receipts.
  - ♦ Prohibitions: Lottery Business, Gambling and Betting, Chit Funds, Nidhi Company, Trading in Transferable Development Rights, etc.

### 5. Ans: (a)

#### About Unified Payments Interface (UPI):

- Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.
- Currently, several countries, including Bhutan, Nepal, UAE, France, Mauritius, etc., support UPI payments.

### 6. Ans: (d)

- PACS: It is a village-level institution that works directly with rural residents. It encourages agriculturists to save, accepts deposits from them, makes loans to deserving borrowers, and collects repayments.
- PACS are the lowest unit in a three-tier structure: The other two tiers — State Cooperative Banks (StCB) and District Central Cooperative Banks (DCCB) — have already been automated by the

NABARD and brought on the Common Banking Software (CBS).

**7. Ans: (b)**

Swami Vivekananda attended in 1893 the famous, 'Parliament of Religions' at Chicago, and made a deep impact on those congregated there.

**8. Ans: (b)**

Even as Indian intellectuals felt challenged by western Enlightenment and rationalistic movements, there was a strain of thinking in the West which looked to the East for spiritual salvation.

- From this idea emerged the Theosophical Society, founded by Madam H.P. Blavatsky and Colonel H.S. Olcott in the United States of America in 1875.
- They came to India in 1879 and established their headquarters at Adyar in 1886.

**9. Ans: (d)**

Phule held radical views on social, religious, political and economic issues. He considered the caste system as an antithesis of the principle of human equality.

- He sought to raise the morale of the non-Brahmins and united them to revolt against the centuries old inequality and social degradation.
- Towards this end Phule founded the Satya Shodak Samaj (Society for Seeking Truth) in 1875.

**10. Ans: (b)**

- Excise duty is an indirect tax collected by retailers or intermediaries from customers at the point of sale. It is paid when goods move from manufacturing units to warehouses. Governed by two key acts, the Central Excise Act of 1944 handles levy and collection, while the Central Excise Tariff Act of 1985 classifies goods and sets duty rates. With the implementation of Goods and Services Tax (GST), many excise duties were subsumed, leaving only petroleum and liquor subject to excise duty. Central GST replaces excise duty in most cases, while state governments collect excise duty on alcohol, alcoholic preparations, and narcotic substances, referred to as "State Excise" duty.

**11. Ans: (b)**

- S1 is correct: ONDC is indeed an initiative by the Government of India designed to create an open-source network that any retailer can join, facilitating broader participation in digital commerce across the country.
- S2 is incorrect. ONDC does not mandate that all transactions must be conducted in Indian Rupees only. The network focuses on interoperability and inclusivity, but it does not impose such a restriction on the currency of transactions.
- S3 is correct. The architecture of ONDC supports interoperability between different e-commerce platforms and service providers, allowing for a

more integrated and seamless digital commerce experience.

**12. Ans: (c)**

- Hyperinflation is an extreme form of inflation characterized by rapid and out of-control increases in prices. One consequence of hyperinflation is the erosion of savings and wealth as the real value of money rapidly declines.

Option C accurately describes this consequence, as individuals' savings and assets lose value in hyperinflationary environments.

Options A, B, and D are not consequences associated with hyperinflation; instead, they may be observed under conditions of low or stable inflation.

**13. Ans: (d)**

- SEBI forms a committee, chaired by Usha Thorat, to review the ownership and economic structure of clearing corporations.
- Aim: Ensure resilience, independence, and neutrality. Previous norms by SEBI focused on dispersed ownership and governance framework. The current structure is dominated by parent exchanges, raising concerns about independence and capital infusion. Globally, major clearing corporations have diversified shareholding models.

**14. Ans: (c)**

**Clearing Corporation of India Limited (CCIL):**

- It was set up in April 2001 to provide guaranteed clearing and settlement functions for transactions in money, G-Secs, foreign exchange, and derivative markets.
- CCIL also provides non-guaranteed settlement for Rupee interest rate derivatives and cross-currency transactions through the CLS Bank.
- Promoters: State Bank of India, IDBI Bank Ltd, ICICI Bank Ltd, Life Insurance Corporation of India (LIC), Bank of Baroda and HDFC Bank Ltd.
- It has also set up a Trade Repository to enable financial institutions to report their transactions in Over-the-Counter (OTC) derivatives.

**15. Ans: (a)**

- S1 is correct. The agreement indeed includes provisions for cooperation between customs and other relevant authorities to facilitate trade and ensure compliance with customs regulations. This cooperation is vital for the smooth implementation of the agreement.
- S2 is incorrect. The TFA includes special and differential treatment (SDT) provisions that give developing and least-developed countries (LDCs) flexibility in implementing the agreement. These countries are allowed to determine their own implementation schedules and are provided with assistance and support for capacity-building.

**16. Ans: (b)**

- Context: The 16th meeting of the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) concluded
  - ♦ An inclusive framework on BEPS is finalizing negotiations on Pillar One, while the Global Minimum Tax under Pillar Two is being implemented in countries globally
- **What is an Inclusive Framework?**
- **What is BEPS?**
  - ♦ The OECD/G20 Inclusive Framework on BEPS, with 147 countries and jurisdictions including India, fights tax avoidance and promotes fair tax practices through a Two-pillar approach: Pillar One reallocates profits of large MNEs, while Pillar Two establishes a Global Minimum Corporate Tax of 15%. This framework ensures fairness in tax systems, addresses tax avoidance, and adapts to evolving business models and digital economies.
  - ♦ It refers to corporate tax planning strategies used by multinationals to shift profits from higher-tax jurisdictions to lower or no-tax jurisdictions.
  - ♦ The OECD defines BEPS strategies as exploiting gaps and mismatches in tax rules. It erodes the tax base (costing countries USD 100-240 billion in lost revenue annually) of the higher-tax jurisdictions.

#### 17. Ans: (a)

- S1: Correct. The repo rate is indeed the rate at which the central bank (Reserve Bank of India) lends money to commercial banks, typically against government securities.
- S2: incorrect. When the repo rate decreases, the cost of borrowing becomes cheaper. This can encourage spending and investment in an economy, stimulating economic growth. Conversely, an increase in the repo rate can make borrowing costs higher, decreasing disposable income and dampening economic growth.
- S3: incorrect. A decrease in the repo rate usually makes borrowing cheaper for commercial banks, which can then pass on the lower rates to businesses and consumers, encouraging borrowing and investment.

#### 18. Ans: (c)

##### Tools for Controlling Interest rates

- Open Market Operations (OMO): The RBI buys or sells government securities to adjust money supply and interest rates.
- Cash Reserve Ratio (CRR): The percentage of deposits banks must hold with the RBI, influencing their lending capacity.
- Statutory Liquidity Ratio (SLR): The percentage of deposits banks must invest in government securities, also affecting liquidity and interest

rates.

#### 19. Ans: (c)

- S1: Correct. The velocity of money increases when the frequency of transactions rises because it means that money is changing hands more frequently within a given period.
- S2: Correct. A high velocity of money usually indicates a high level of economic activity since money is being spent rapidly on goods and services, suggesting a robust and active economy.
- S3: Correct. If the velocity of money decreases, it suggests that people prefer to hold onto their money rather than spend it, which can indicate economic uncertainty or lower confidence in economic conditions.

#### 20. Ans: (a)

- S1 is correct: It decides the repo rates, CRR, SLR etc. It replaced the earlier system of policy rate veto by the RBI governor.
- S2 is incorrect: It consists of six members (RBI Governor, Deputy Gov RBI, One RBI officer and three members nominated by the government), and they hold office for a period of four years.
- S3 is incorrect: The Governor of the RBI is the ex-officio Chairperson of MPC.

#### 21. Ans: (d)

- Recently RBI has refrained from cutting interest rates despite declining retail inflation rates, which have hovered near the 4% mark since September 2023.
- **What is Sticky Inflation?**
  - ♦ Sticky inflation refers to a situation where inflation rates remain relatively high or stable over time, despite changes in economic conditions or monetary policy. This phenomenon is characterized by a slow decline in inflation rates and resistance to central bank efforts to lower them through measures like interest rate cuts.
  - ♦ Reasons: Rising wages and prices for consumer goods and services are typically the main factors behind inflation stickiness. ○ Implications: It can push monetary authorities to tighten monetary policy and raise interest rates.
- S1 is incorrect because sticky inflation occurs when prices do not adjust quickly to changes in supply and demand.
- S2 is incorrect because sticky inflation indicates that inflation rates are not highly sensitive to short-term economic fluctuations.

#### 22. Ans: (a)

- In the context of the trend of establishing quality residential schools for the promotion of education in all areas and habitations in the country, the Eklavya Model Residential Schools (EMRS) for



ST students take their place among the Jawahar Navodaya Vidyalayas, the Kasturba Gandhi Balika Vidyalayas and the Kendriya Vidyalayas. Eklavya Model Residential Schools (EMRS) are set up in States/UTs with grants under Article 275(1) of the Constitution of India.

- The scheme is being implemented by the Ministry of Tribal Affairs, Government of India.
- The objective of EMRS is to provide quality middle and high level education to Scheduled Tribe (ST) students in remote areas, not only to enable them to avail of reservation in high and professional educational courses and as jobs in government and public and private sectors but also to have access to the best opportunities in education at par with the non ST population.
- As per existing EMRS Guidelines of 2010, at least one EMRS is to be set up in each Integrated Tribal Development Agency (ITDA) / Integrated Tribal Development Project (ITDP) having 50% ST population in the area.
- Ministry of Tribal Affairs has recognised 163 priority districts having 25% or more Scheduled Tribe (ST) population for implementation of tribal development programmes including establishment of Eklavya Model Residential Schools (EMRSs). Across the country, as per census 2011 figures, there are 564 sub-districts, i.e. blocks/taluka/tehsils, having more than 50% ST population and at least 20,000 tribal persons.
- As per the budget 2018-19, every block with more than 50% ST population and at least 20,000 tribal persons, will have an Eklavya Model Residential School by the year 2022. In these schools, education will be entirely free.
- The EMRSs may be affiliated either to the State or Central Boards of Secondary Education as desired fit by the State Governments/UT Administration. Each State Government/UT Administration would be solely responsible for the management and effective functioning of the EMRSs.
- State Governments/UT Administration may opt for any feasible/ suitable mode of management whether by autonomous education societies; public-private partnership with reputed educational institutions; in arrangement with the State Department of Education or any other mode found suitable.

### 23. Ans: (b)

- Statements 1 and 2 are not correct.
- Delhi's current status as a Union Territory with a Legislative Assembly is an outcome of the 69th Amendment Act through which Articles 239AA and 239BB were introduced in the Constitution.
- S2: The status of the Lieutenant Governor of Delhi is not that of a Governor of a State, rather he remains an Administrator, in a limited sense, working with the designation of Lieutenant Governor.

- S3: The L-G does have the power to refer any matter, over which there is a disagreement with the elected government, to the President under Article 239AA(4).

### 24. Ans: (b)

- In the Republic of India, a lieutenant governor is the constitutional head of five of the eight union territories. The lieutenant governor is appointed by the President of India for a term of five years, and holds office at the President's pleasure.

### 25. Ans: (c)

- The Indian government is set to implement the e-office system in 133 attached and subordinate offices, as well as autonomous bodies.
- The Department of Administrative Reforms and Public Grievances (DARPG) will lead this initiative with the National Informatics Centre (NIC) serving as the knowledge partner.
- **About e-Office:**
  - ♦ A mission mode project under the National e-Governance Program, developed by the National Informatics Centre (NIC), provides a digital workplace solution.
  - ♦ Built on open architecture, it is a reusable product for replication across governments.

### 26. Ans: (a)

- Statement 1 is correct: Nanoparticles are defined as particles that have dimensions in the range of 1 to 100 nanometers.
- Statement 2 is correct: Nanoparticles exhibit unique properties, such as increased reactivity, strength, or electrical characteristics, primarily due to their high surface area to volume ratio, which is significantly different from their bulk material forms.
- Statement 3 is incorrect: Nanoparticles can be made from a variety of materials, not just metals. They can also be made from polymers, ceramics, and carbon-based materials, among others.

### 27. Ans: (b)

- Context: NASA's CHAPEA project involved four volunteers living in a simulated Mars habitat for a year to study the challenges of long-duration missions to Mars.
- The mission, part of NASA's Crew Health and Performance Exploration Analog (CHAPEA), was the first of three planned simulations.
- The habitat, called "Mars Dune Alpha," was a 1,700 sq ft 3D-printed structure at the Johnson Space Center in Houston, Texas, designed to replicate Martian conditions, including a backdrop of red, rocky cliffs and simulated Martian soil.
- The crew experienced conditions similar to those on Mars, including spacewalks in "Marswalks" suits, growing vegetables, and dealing with communication delays, limited resources, and prolonged isolation.

### 28. Ans: (c)

- S1 is correct. The Dibang River is indeed a tributary of the Brahmaputra River.
- S2 is correct. The Lohit River merges with the Dibang River before they both join the Brahmaputra River.

**29. Ans: (c)**

**About Siang River:**

- The Tsangpo, which originates in China, is called the Siang after it enters India through the Upper Siang district in the northeastern state.
- The Siang joins two other rivers – the Lohit and the Dibang – downstream to form the Brahmaputra.

**30. Ans: (b)**

- The Three Gorges Dam is situated on the Yangtze River in Hubei province, China. It is the world's largest hydroelectric power station in terms of installed capacity. The construction of the dam started in 1994 and was completed in 2012. The primary purpose of the dam is to generate electricity, improve river navigation, and reduce the potential for floods downstream by providing flood storage space. The project has been a significant part of China's efforts to develop its renewable energy resources and manage its river systems.

**31. Ans: (b)**

- S1: Correct. Constitutional morality indeed requires adherence to the fundamental principles enshrined in the Constitution, such as justice, liberty, equality, and fraternity. These principles form the bedrock of the constitutional framework.
- S2: Correct. Respect for constitutional institutions and adherence to the established procedures is a key aspect of constitutional morality. It ensures that the governance is carried out within the prescribed constitutional boundaries.
- S3: Incorrect. Constitutional morality does require individual members of the government to act within the bounds of constitutional propriety. This means that their actions should align with constitutional values and principles.

**32. Ans: (c)**

- The study titled 'Ageing in India – Exploring Preparedness & Response to Care Challenges – A HelpAge India Report' was released on the eve of World Elder Abuse Awareness Day (15th June).
- S2: Rashtriya Vayoshri Yojana is scheme for providing Physical Aids and Assisted-living Devices for Senior citizens belonging to BPL category.
- S4: This is a Central Sector Scheme, fully funded by the Central Government.
- S3 is incorrect: The expenditure for implementation of the scheme is being met from the "Senior Citizens' Welfare Fund".
- S1: The Scheme is being implemented by the

Artificial Limbs Manufacturing Corporation (ALIMCO), a PSU under the Ministry of Social Justice and Empowerment.

**33. Ans: (b)**

- A report has been released on the TWO DECADES OF THE QUAD: Diplomacy & Cooperation in the Indo-Pacific
- S1 is Correct: The Quad is indeed an informal strategic forum that includes the United States, India, Japan, and Australia.
- S2 is Correct: One of the primary focuses of the Quad is to ensure a free and open Indo-Pacific region.
- S3 is Incorrect: While the Quad countries do participate in joint military exercises, the Malabar exercises were originally a bilateral exercise between India and the United States and later included Japan. Australia was invited to participate in 2020, but it is not officially part of the Quad framework.

**34. Ans: (c)**

**Sustainable Development Report 2024**

- By UN Sustainable Development Solutions Network (SDSN)
- **Key Highlights of the report:**
  - ♦ Globally, only 16% of SDG targets are on track for achievement by 2030. Progress varies widely among countries, with Nordic nations leading, BRICS making strides, and Poor & Vulnerable nations falling behind.
  - ♦ India is ranked 109th out of 166 countries, with on-track performance in Poverty reduction and Quality Education targets while decreasing progress in Sustainable Cities and Climate Action targets.

**35. Ans: (a)**

- SIPRI Yearbook 2024: Armaments, Disarmament, and International Security released
- S1 is false. SIPRI is headquartered in Solna, Sweden, not New York City, and it is an independent organization, not funded by the United Nations.
- S2 is true. SIPRI publishes an annual report that includes data on global military expenditures, arms transfers, and other security-related topics.
- S3 is false. While SIPRI does conduct research on nuclear disarmament and non-proliferation, its research scope is broader and includes various aspects of international peace and security, such as arms control, conflict, and peacebuilding.

**36. Ans: (b)**

- The Punjab government is promoting the direct seeding of rice (DSR) technique due to its benefits, such as reducing water usage by 15-20%, requiring less labour, and maturing faster than traditional methods.
- Direct seeding of rice typically reduces the water requirement for the crop compared to traditional

transplanting methods. This is because direct seeding avoids the need for continuous flooding, which is often necessary in transplanting to control weeds and ensure seedling establishment. Direct seeding can lead to early crop establishment and maturity, as the seeds are sown directly into the field, eliminating the need for raising and transplanting seedlings. It also reduces labor costs because it bypasses the labor-intensive process of transplanting. However, managing weeds can be more challenging in direct seeding, as the absence of continuous flooding can encourage weed growth.

### 37. Ans: (c)

- S1: Correct. Matsya 6000 is indeed an Indian deep-sea manned submersible vehicle developed under the Samudrayaan Mission, which aims to explore the deep ocean.
- S2: Correct. Matsya 6000 is designed to carry three people to a depth of 6,000 meters in the ocean.
- S3: Correct. The submersible is equipped with advanced technology, including robotic arms and high-definition cameras, to facilitate underwater exploration and scientific research.

### 38. Ans: (b)

- India is planning to produce bio-bitumen from biomass and agricultural waste to reduce its reliance on imports and address stubble-burning issues in road construction.
  - ♦ Currently, India imports about half of its annual bitumen requirement.
- Bio-bitumen is a sustainable alternative to conventional bitumen, which is typically derived from petroleum. Unlike traditional bitumen, bio-bitumen is produced from renewable resources such as organic waste materials. This makes it a more environmentally friendly option, as it reduces reliance on fossil fuels and can help decrease greenhouse gas emissions associated with road construction and maintenance. Additionally, using waste materials in its production contributes to waste management and recycling efforts.


### 39. Ans: (d)

- In 1975, India initiated its Crocodile Conservation Project in Odisha's Bhitarkanika National Park with support from the United Nations Development Programme (UNDP) and the UN's Food and Agriculture Organization (FAO).

INSIGHTSIAS

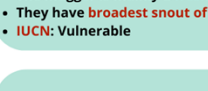
### Species of crocodilians

There are **three species of crocodilians**—saltwater, Mugger and Gharial. Latest Saltic census 2023 have estimated higher count of estuarine crocodiles in Bhitarkanika



#### Saltwater Crocodile (estuarine crocodile)

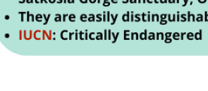
- It is the **largest** of all living reptiles. It is found throughout the east coast of India -**Bhitarkanika mangroves and Sunderbans National Parks**.
- Males are much larger than females, weighing even upto 1000Kg.
- **Habitat:** They inhabit coastal brackish mangrove swamps and river deltas.
- **IUCN:** Least concern



#### Mugger:

The mugger crocodile (Indian crocodile) is found throughout the Indian subcontinent.


- The mugger is mainly a **freshwater species**, and found in lakes, rivers and marshes.
- They have **broadest snout of all**, they are keystone species of their habitat.
- **IUCN:** Vulnerable



#### Gharial:

The Gharial or fish-eating crocodile is native to the Indian subcontinent.

- Small released populations are present and increasing in the rivers of the **National Chambal Sanctuary**, Katarniaghat Wildlife Sanctuary, Son River Sanctuary and the rainforest biome of Mahanadi in Satkosia Gorge Sanctuary, Orissa.
- They are easily distinguishable due to their **long snouts (nose)**
- **IUCN:** Critically Endangered



#### Bhitarkanika National Park (Kendrapara district in Odisha):

The park is **second-largest mangrove forest (after Sunderbans)** and is lying in the estuarial region of **Brahmani, Baitarni, Dharma and Patasala River**. It is also a Ramsar Site.

Visit Insights IAS Daily CA for detailed News

### 40. Ans: (d)

- Context: The documentary “My Mercury” premiered at the 18th Mumbai International Film Festival (MIFF) for Documentary, Short Fiction, and Animation Films.
  - ♦ The film explores the life of her brother, Yves Chesselet, a conservationist on Mercury Island off the coast of Namibia. The 104-minute documentary portrays Yves’ efforts to reclaim the island for endangered seabirds and seals, emphasizing the psychological challenges and deep bond between man and nature.
- **About Mercury Island:**
  - ♦ Mercury Island is a small rocky island off The Diamond Coast, Namibia. Despite its small size, it is recognised by BirdLife International and other global conservation groups as an Important Bird Area (IBA) for its significant coastal seabird breeding.
- Important Bird Areas (IBAs) are recognized by BirdLife International, a global partnership of non-governmental organizations focused on the conservation of birds and their habitats. The IBA program identifies and works to conserve areas that are vital to the conservation of bird populations. BirdLife International developed the IBA concept in the 1980s, and it has since become a key conservation tool used worldwide to prioritize and protect critical bird habitats.

### 41. Ans: (a)

- The NET (National Eligibility Test) and NEET (National Eligibility cum Entrance Test) controversy highlights systemic failures and poor policy implementation over the years. Recurrent paper leaks, exam cancellations, incorrect results, and unexplained grace marks have eroded trust in the National Testing Agency (NTA).
- The National Testing Agency (NTA) is an



autonomous organization registered under the Indian Societies Registration Act of 1860. It conducts entrance examinations for admission into higher educational institutions (not All) in India. NTA is chaired by an eminent educationist appointed by the Ministry of Human Resource Development, with the Chief Executive Officer (CEO) serving as the Director-General appointed by the Government. Its functions include identifying partner institutions for online examinations, creating a question bank, fostering research and development, collaborating internationally, and conducting examinations as assigned by Government Ministries/Departments.

**42. Ans: (c)**

- Emotional Intelligence (EI) is crucial in today's interactions, especially for public servants who must navigate complex situations.
- **What is Emotional Intelligence (EI)?**
  1. Emotional Intelligence (EI) refers to the ability to recognize, understand, and manage one's own emotions, as well as to perceive and influence the emotions of others effectively. It involves being self-aware of one's emotional state, managing emotions in a constructive manner, empathizing with others, and using emotional information to guide thinking and behaviour.

**43. Ans: (c)**

- The International Day of Yoga was indeed proposed by India's Prime Minister Narendra Modi during his address to the UN General Assembly in 2014. The first celebration took place on June 21, 2015, a date chosen because it is the summer solstice, the longest day of the year in the Northern Hemisphere, which holds special significance in many cultures. However, the theme for the first International Day of Yoga in 2015 was actually "Yoga for Harmony and Peace", not just "Yoga for Peace".

**44. Ans: (c)**

- The Summer Solstice, which typically occurs around June 21st in the Northern Hemisphere, is the day when the Sun reaches its highest position in the sky at noon. This event marks the longest day and the shortest night of the year in terms of daylight hours.

**45. Ans: (b)**

- S1 is correct. Diatoms have a unique cell wall composed of silica, known as a frustule. This silica-based cell wall is often beautifully patterned and forms intricate structures.
- S2 is incorrect. Diatoms are found in both freshwater and marine environments. They are a diverse group of algae that inhabit various aquatic ecosystems around the world.
- S3 is correct. Diatoms are significant contributors

to the global carbon cycle. They perform photosynthesis and are responsible for a large portion of the primary production in the world's oceans, thus playing a critical role in carbon fixation.

**46. Ans: (c)**

The Gujarat Forest Department has begun transferring spotted deer (cheetal) and sambars from Gir Forest to Barda Wildlife Sanctuary, aiming to enhance the prey base for Asiatic lions. This move follows the migration of six lions to Barda from Gir, marking their return after 143 years.

**47. Ans: (a)**

- Option A: Lions are unique among big cats for their social structure. They live in groups called prides, which typically consist of related females, their offspring, and a small number of adult males.
- Option B: In lion prides, it is primarily the females that do the hunting, working together to catch prey. Male lions usually defend the pride's territory and protect the group.
- Option C: While lions do hunt at night, they are also active at dawn and dusk. They rest and sleep for much of the day, but they are not strictly nocturnal.
- Option D: Although the roar of a lion is indeed very loud and can be heard from a distance of up to 5 miles (8 kilometers), the claim of 10 miles is an exaggeration.

**48. Ans: (d)**

- S1: Kaziranga National Park is situated in the northeastern state of Assam.
- S2: Kaziranga National Park has the world's largest population of Indian one-horned rhinoceroses.
- S3: Kaziranga National Park was designated a UNESCO World Heritage Site in 1985 due to its unique natural environment and biodiversity.
- S4: Kaziranga National Park is located on the floodplains of the Brahmaputra River, which contributes to its rich and diverse ecosystem.

**49. Ans: (b)**

- The Karnataka government has approved the Centre's proposal to revive gold mining and auction 13 tailing dumps spanning 1,003 acres at Kolar Gold Fields (KGF).
- The mines, owned by Bharat Gold Mines Ltd. (BGML), are set for revival under the Mines and Minerals Development and Regulation Act, 1957. The move aims to generate employment and boost domestic gold production. KGF is among the deepest in the world. Mining at KGF began in 1880 by Jhon Taylor & Sons. After 121 years of operation, the mines closed on February 28, 2001, due to high operational costs and low revenues. Besides gold extraction, KGF has been utilized for particle physics experiments, leading to the

discovery of atmospheric neutrinos.

- Currently, India operates three gold mines: Hutti and Uti in Karnataka, and Hirabuddini in Jharkhand. India produces approximately 1.6 tonnes of gold annually, far below its consumption of 774 tonnes per year.
- KGF (Kolar Gold Fields) is situated 100 kilometres from Bangalore in Karnataka's Kolar district.

#### 50. Ans: (b)

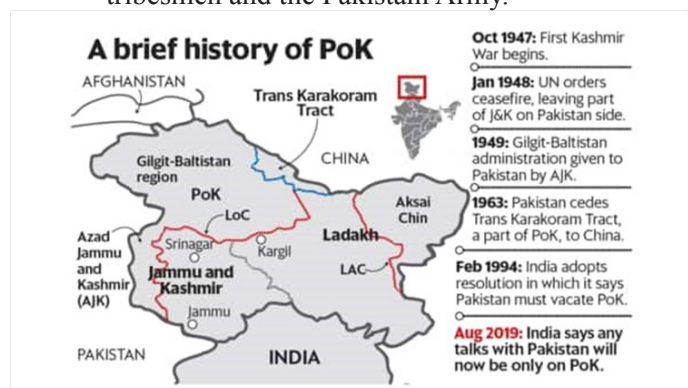
- River Diphlu commonly known as Vick Niann is a rivulet that originates from the Karbi Anglong hills, Assam and passes through the Kaziranga National Park and joins the River Brahmaputra on its south bank.

#### 51. Ans: (d)

- Under the Seventh Amendment, the existing terminology of Part A, Part B, Part C, and Part D states was altered. The distinction between Part A and Part B states was removed, becoming known simply as "states". A new type of entity, the Union Territory, replaced the classification as a Part C or Part D state.

#### 52. Ans: (c)

- Pakistan's government has acknowledged before the Islamabad High Court that Pakistan Occupied Kashmir (PoK) is a foreign territory.
- **About PoK:**
  1. PoK was historically part of the princely state of Jammu and Kashmir, which acceded to India in 1947 after the Partition.
  2. It consists of two ethnically and linguistically different regions: Mirpur-Muzaffarabad region and Gilgit-Baltistan region.
  3. However, the region was illegally occupied by Pakistan in 1947 following an invasion by Pashtun tribesmen and the Pakistani Army.



#### 53. Ans: (b)

##### NHRC-India

##### About

It is a statutory body established on 12 October 1993 (in conformity with the Paris Principles), under the Protection of Human Rights Act (PHRA) 1993 [Amended in 2019].

##### Objective

A watchdog for the promotion and protection of the human rights of citizens of India. The PHRA defines Human Rights as the rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International Covenants and enforceable by courts in India.

#### 54. Ans: (a)

##### About Unified Payments Interface (UPI):

- Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.
- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.
- Currently, several countries, including Bhutan, Nepal, UAE, France, Mauritius, etc., support UPI payments.

#### 55. Ans: (b)

- Founded in December 2008, the NPCI is a not-for-profit organisation registered under Section 8 of the Companies Act 2013, established by the Reserve Bank of India and the Indian Banks' Association. The organisation is owned by a consortium of major banks, and has been promoted by the country's central bank, the Reserve Bank of India.
- RuPay (portmanteau of Rupee and Payment) is an Indian multinational financial services and payment service system, conceived and launched by the National Payments Corporation of India (NPCI) in 2012.
- NPCI is the brain behind the popular UPI platform, which facilitates instant interbank money transfers using a mobile phone.

#### 56. Ans: (c)

- Foreign Currency Assets, as defined in Section 33 of the RBI Act, 1934.

Forex Reserves Component	Billion \$	%
1. Foreign Currency Assets	519.5	88.22%
2. Gold	45.7	7.76%
3. SDRs	18.5	3.14%
4. Reserve Position in IMF	5.2	0.88%
<b>Total Forex Reserves</b>	<b>588.9</b>	<b>100.00%</b>

#### 57. Ans: (b)

- FSSAI and APEDA have developed a new "Unified India Organic" logo to replace the existing India Organic and Jaivik Bharat logos.
- **Certification Description**
- **Participatory Guarantee System (PGS)**
  1. Implemented by the Ministry of Agriculture and Farmers Welfare. Ensures organic product production adheres to quality standards. Does not require third-party certification agencies. Certification is carried out by local groups



consisting of producers and consumers and is based on trust. Involves a documented logo or statement as proof of certification.

- **National Programme on Organic Production (NPOP)**

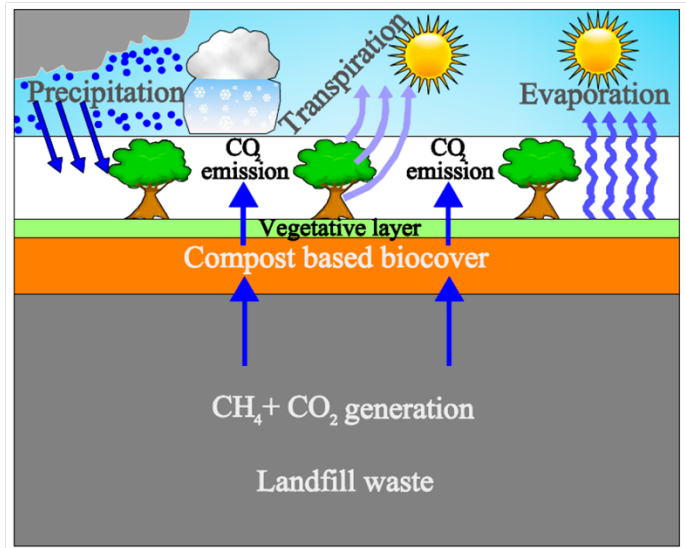
1. Implemented by APEDA, under the Ministry of Commerce & Industries. Regulates organic farming certification. Involves accreditation of Certification Bodies. Sets standards for organic production. Promotes organic farming and marketing. Its Standards have been recognized by the EU, Switzerland, and the US.
- AGMARK is a certification mark for agricultural produce, assuring that they conform to a grade standard notified by Directorate of Marketing & Inspection (DMI), Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture & Farmers Welfare under Agricultural Produce (Grading Marking) Act, 1937.

**58. Ans: (d)**

- Genomes are the complete set of genetic material within an organism, including DNA sequences that encode its traits and functions. They serve as the blueprint for an organism's development, growth, and behaviour.
- S1: Genomes contain a mix of genes, regulatory elements, and non-coding DNA.
- S2: Bacteria and archaea also have genomes, although they are typically simpler than those of eukaryotes

**59. Ans: (b)**

- The use of microbial methane oxidation systems, specifically biocovers utilizing fine fractions from landfill mining, presents a promising model for methane control.
  - **What is Biocover?**
1. Biocovers are a type of methane oxidation system that utilizes the fine fraction material from landfill mining to effectively control methane emissions. These are porous material layers laid directly on top of a landfill which is then covered by an oxidizing layer of mature compost. It provides optimal conditions for methanotrophic (methane-utilizing) bacteria to thrive and act as biofilters, hence controlling methane emissions by converting methane to CO<sub>2</sub>.



**60. Ans: (d)**

- FSSAI was established on 5 September 2008 under Food Safety and Standards Act, 2006 which was operationalized in 2006.
- Food Safety and Standards Authority of India (FSSAI) lays down the hygiene and safety standards that ensure the availability of safe and quality food in any food business especially items of food sold in a Grocery

**61. Ans: (d)**

- Article 21 – Protection of life and personal liberty also include right to privacy
- In People's Union for Civil Liberties vs Union of India, Kharak Singh vs State of UP — Supreme Court held that the right to privacy is a part of right to protection of life and personal liberty under Article 21.

**62. Ans: (b)**

- The Uniform Civil Code (UCC) is mentioned in Article 44 of the Indian Constitution, which is part of the Directive Principles of State Policy (DPSP) located in Part IV. The Directive Principles are guidelines for the creation of laws by the government, aimed at ensuring social and economic democracy. Unlike the Fundamental Rights in Part III, the Directive Principles are not justiciable, meaning they cannot be enforced by the courts, but they are fundamental in the governance of the country. Article 44 specifically directs the state to endeavor to secure a uniform civil code for all citizens throughout the territory of India.

**63. Ans: (a)**

- S1 is incorrect: The Indus Water Treaty was indeed signed between India and Pakistan in 1960.
- S2 is correct: The World Bank acted as a mediator in the signing of the Indus Water Treaty, helping both countries reach an agreement.
- S3 is incorrect: The treaty has faced various disputes and issues over the years, although it has largely been successful in preventing major conflicts over water between the two countries.

**64. Ans: (b)**

- The Indus Water Treaty, signed in 1960 between India and Pakistan, allocates the waters of the Indus River system between the two countries. According to the treaty, the three western rivers (Indus, Jhelum, and Chenab) are allocated to Pakistan, while the three eastern rivers (Beas, Ravi, and Sutlej) are allocated to India. This division allows both countries to utilize the water resources within their respective territories while maintaining a cooperative framework for water management.

**65. Ans: (b)**

- S1 is correct: The Panchayat (Extension to Scheduled Areas) Act (PESA) of 1996 extends the provisions of Part IX of the Indian Constitution, which deals with Panchayats, to Scheduled Areas with certain modifications and exceptions.
- S2 is correct: Under PESA, Gram Sabhas are vested with the power to approve plans, programs, and projects for social and economic development, making them central to the decision-making process in the village.
- S3 is incorrect: PESA recognises the traditional system of the decision-making process and stands for the peoples' self-governance.

**66. Ans: (b)**

- Srinagar has been officially recognized as a "World Craft City" by the World Crafts Council (WCC), highlighting its rich heritage and the exceptional skills of its artisans.
- **About WCC:**
  1. Launched in 2014 by World Crafts Council-International.
  2. Establishes a dynamic network of craft cities across the globe, aligning with the principles of creative economy.

**67. Ans: (b)****About the International Hydrographic Organisation (IHO):**

- The International Hydrographic Organization (IHO) is an intergovernmental organization that ensures the world's seas, oceans, and navigable waters are surveyed and charted. It coordinates the activities of national hydrographic offices. The IHO Secretariat has been based in Monaco since its establishment in 1921. The organization has 100 member states, including India.

**68. Ans: (c)**

- The Kerala Legislative Assembly unanimously passed a resolution, to amend the Constitution and change the state's name from 'Kerala' to 'Keralam'.
- This resolution, calls for invoking Article 3 of the Indian Constitution to update the name in the First Schedule.

**• Procedure for renaming the states:**

1. Renaming a state in India is governed by Article 3 of the Constitution, which empowers Parliament to alter the name of any state by law.
2. The process can be initiated by either Parliament or the State Legislature. A bill must be introduced in Parliament on the recommendation of the President, who then refers it to the state legislature for their views.
3. The bill is passed in each house by a simple majority. Once the President assents, the name change is recorded in the First and Fourth Schedules of the Constitution.

**69. Ans: (c)**

- S1 is Correct: Coal gasification involves reacting coal with oxygen, steam, and/or hydrogen to form a gas mixture. This gas mixture can be further processed to produce synthetic natural gas.
- S2 is Correct: One of the valuable by-products of coal gasification is hydrogen, which can be used in various applications, including fuel cells and as a feedstock for chemical industries.
- S3 is Correct. Coal gasification allows for the capture and storage of carbon dioxide more efficiently compared to traditional coal combustion methods. This can help in reducing overall CO2 emissions.

**70. Ans: (d)**

- Context: Scientists recently discovered that termite mounds along the Buffels River in Namaqualand are the world's oldest inhabited, dating back 34,000 years.

**• What is Namaqualand?**

1. Namaqualand is a desert region in southwestern Africa, extending from the Karas region in Namibia to the Northern Cape province in South Africa. It stretches from the Namib Desert in the west to the Kalahari Desert in the east. The northern part, known as Great Namaqualand, is in Namibia, while the southern part, called Little Namaqualand, is in South Africa. This arid area is known for its succulents and spectacular spring wildflower blooms following winter rains. Historically, the Nama people lived there, mining copper and, later, diamonds were discovered in the early 1900s.

**71. Ans: (a)**

- Southern Cryonics, an Australian company, has successfully frozen its first client in hopes of reviving him in the future. The process involves cryonics, where the body is preserved at -196°C, aiming for eventual restoration using advanced medical technologies.
- The first client, an 80-year-old man from Sydney, underwent the procedure after his death, involving cooling, perfusion with cryoprotective solution,



and storage in dry ice before reaching the final temperature of around  $-200^{\circ}\text{C}$  in a specialized cooling chamber.

- S1: Cryonics is indeed the practice of preserving individuals at very low temperatures with the hope that future medical technology will be able to revive them. The idea is to preserve the body (or just the brain) soon after death, at a temperature where physical decay is essentially halted.
- S2: Cryonics does not guarantee that individuals will be revived in the future. It is based on the hope that future advancements in technology and medicine may make revival possible, but there is no certainty.

**72. Ans: (b)**

- Naik Dhananjay Kumar Singh, an Indian peacekeeper who served with the UN Stabilisation Mission in the Democratic Republic of Congo (MONUSCO), will be posthumously honoured with the prestigious Dag Hammarskjöld medal.
- **Dag Hammarskjöld Medal:**
  - ♦ Purpose: The Dag Hammarskjöld Medal is a posthumous award given to members of peacekeeping operations who have lost their lives in service under the UN flag.
  - ♦ Inception: The first medal was presented in 1998 to the family of Dag Hammarskjöld.
  - ♦ Namesake: Dag Hammarskjöld served as the Secretary-General of the United Nations from 1953 until his death in 1961.

**73. Ans: (d)**

- S1: North Kivu and Ituri are the eastern provinces of Democratic Republic of Congo. The President of Congo, Felix Tshisekedi declared a "State of Siege" due to the increasing violence in the eastern provinces of North Kivu and Ituri. The violence killed more than hundred people and displaced more than 1.5 million.
- S2: The Nagorno-Karabakh conflict was an ethnic and territorial conflict between Armenia and Azerbaijan over the region of Nagorno-Karabakh, inhabited mostly by ethnic Armenians until 2023, and seven surrounding districts, inhabited mostly by Azerbaijanis until their expulsion during the 1990s.
- S3: Russia released vote tallies showing overwhelming support in four provinces of Ukraine to join with Russia. The four regions are Donetsk, Luhansk, Zaporizhzhia and Kherson.

**74. Ans: (a)**

- Stromatolites are layered rock formations created by microbial communities, representing some of the earliest evidence of life on Earth. These structures are formed as layers of sediment accumulated over time, trapping and binding microorganisms like cyanobacteria.
- As these microorganisms grow and photosynthesize,

they produce layers of carbonate minerals, gradually building up the stromatolite structure. Despite their simple appearance, stromatolites played a crucial role in shaping Earth's early environment and are considered significant in the study of early life and evolutionary history.



**75. Ans: (b)**

- Researchers have discovered living stromatolites on Sheybarah Island in the Red Sea, Saudi Arabia.

**76. Ans: (c)**

- The India Meteorological Department (IMD) is an agency of the Ministry of Earth Sciences of the Government of India. It is the principal agency responsible for meteorological observations, weather forecasting and seismology. IMD is headquartered in Delhi and operates hundreds of observation stations across India and Antarctica. Regional offices are at Chennai, Mumbai, Kolkata, Nagpur, Guwahati and New Delhi.
- IMD is also one of the six Regional Specialised Meteorological Centres of the World Meteorological Organisation.

**77. Ans: (c)**

- The Reserve Bank of India's (RBI) variable rate repo (VRR) auction attracted significant interest from banks, with bids totalling 1,13,915 crore, surpassing the RBI's offer of 50,000 crore.
- This underscores the growing demand for liquidity in the banking sector amid an estimated deficit of around 1.54-lakh crore.
- **What is VRR, or Variable Rate Repo?**
  - ♦ It is a mechanism where the RBI permits banks to borrow funds at rates determined by the market, differing from the fixed Repo Rate at which banks borrow directly from the RBI.
  - ♦ Typically lasting up to 14 days, VRR serves as a means to inject short-term liquidity into the banking system. Conversely, Variable Rate Reverse Repo (VRRR) is employed to absorb surplus liquidity from the system.

**78. Ans: (c)**

- Foreign Direct Investment (FDI) inflows into India fell 3.5% to \$44 billion in FY24 due to



reduced investments in services, telecom, and pharma sectors.

- FDI is not permitted in firms engaged in or attempting to engage in the real estate industry, farmhouse construction, or trading in transferable development rights.
- **About FDI**
  - ♦ Definition: Investment by a company or individual in one country into business interests in another country.
  - ♦ Policy: Formulated by the Department for Promotion of Industry and Internal Trade (DPIIT).
- **Routes:**
  - ♦ Automatic Route: No government approval is required.
  - ♦ Government Route: Approval required.
  - ♦ Inclusions: Foreign Currency Convertible Bonds, Foreign Institutional Investment (with conditions), and Global Depository Receipts.
  - ♦ Prohibitions: Lottery Business, Gambling and Betting, Chit Funds, Nidhi Company, Trading in Transferable Development Rights, etc.

#### 79. Ans: (b)

- Researchers at the Indian Institute of Science (IISc), Bengaluru, have devised a groundbreaking method for mass-producing recombinant proteins, which include vital substances like vaccine antigens, insulin, and monoclonal antibodies.
- **What are Recombinant Proteins?**
  - ♦ Recombinant proteins are proteins that are artificially produced through genetic engineering techniques. These proteins are created by introducing specific DNA sequences, encoding desired protein products, into host organisms such as bacteria, yeast, or mammalian cells. The host cells then use their own cellular machinery to produce the recombinant proteins according to the inserted genetic instructions.
- Recombinant proteins have a wide range of applications, including in medicine (such as vaccine antigens, insulin, and therapeutic antibodies), agriculture, industry, and research. They are crucial for various biotechnological and pharmaceutical purposes due to their precise control over protein structure and function.

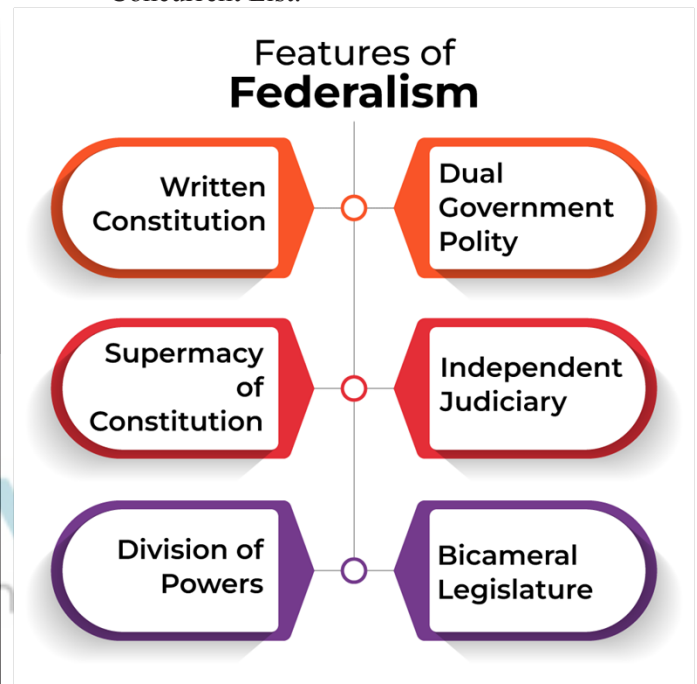
#### 80. Ans: (b)

- The Northeast Frontier Railway (NFR) plans to construct canopy bridges in Assam's Hollangapar Gibbon Sanctuary to help India's only ape, the hoolock gibbon, safely cross railway tracks dividing its habitat.
- The sanctuary, home to about 125 gibbons, faces fragmentation due to a railway track. These bridges, designed by the Wildlife Institute of India (WII) and NFR, will facilitate the arboreal species' movement. Safety measures, including nets, will be implemented to prevent accidents.
- Gibbons, the smallest and fastest of all apes, inhabit tropical and subtropical forests in Southeast Asia.

They have high intelligence, distinct personalities, and strong family bonds. They are one of the 20 gibbon species found worldwide

#### 81. Ans: (a)

- Federalism is a system of government that combines a central or "federal" government with regional governments within a single political framework, distributing powers between them. In India, the Constitution outlines the structure of governance, delineating the relationship between the federal government and state governments. Legislative, administrative, and executive powers are divided between the Union government and the states through the Union List, State List, and Concurrent List.



#### 82. Ans: (a)

- S1: Correct. The repo rate is indeed the rate at which the central bank (Reserve Bank of India) lends money to commercial banks, typically against government securities.
- S2: incorrect. When the repo rate decreases, the cost of borrowing becomes cheaper. This can encourage spending and investment in an economy, stimulating economic growth. Conversely, an increase in the repo rate can make borrowing costs higher, decreasing disposable income and dampening economic growth.
- S3: incorrect. A decrease in the repo rate usually makes borrowing cheaper for commercial banks, which can then pass on the lower rates to businesses and consumers, encouraging borrowing and investment.

#### 83. Ans: (c)

##### Tools for Controlling Interest rates

- Open Market Operations (OMO): The RBI buys or sells government securities to adjust money supply and interest rates.
- Cash Reserve Ratio (CRR): The percentage of deposits banks must hold with the RBI, influencing

their lending capacity.

- Statutory Liquidity Ratio (SLR): The percentage of deposits banks must invest in government securities, also affecting liquidity and interest rates.

**84. Ans: (c)**

- S1: Correct. The velocity of money increases when the frequency of transactions rises because it means that money is changing hands more frequently within a given period.
- S2: Correct. A high velocity of money usually indicates a high level of economic activity since money is being spent rapidly on goods and services, suggesting a robust and active economy.
- S3: Correct. If the velocity of money decreases, it suggests that people prefer to hold onto their money rather than spend it, which can indicate economic uncertainty or lower confidence in economic conditions.

**85. Ans: (a)**

- S1 is correct: It decides the repo rates, CRR, SLR etc. It replaced the earlier system of policy rate veto by the RBI governor.
- S2 is incorrect: It consists of six members (RBI Governor, Deputy Gov RBI, One RBI officer and three members nominated by the government), and they hold office for a period of four years.
- S3 is incorrect: The Governor of the RBI is the ex-officio Chairperson of MPC.

**86. Ans: (a)**

- S1: Correct. BIS is responsible for the formulation, recognition, and promotion of Indian Standards. It sets standards for various products, services, and systems, ensuring quality and safety.
- S2: Incorrect. BIS does not operate solely in the industrial sector; it also covers agricultural and consumer sectors. BIS sets standards for a wide range of products and services across various sectors.

**87. Ans: (b)**

- The Consumption Expenditure Survey 2022-23 reveals that Indian households, both rural and urban, spent the most on processed food.
- The National Sample Survey Office (NSSO) released the Household Consumption Expenditure Survey (HCES), which collects data on household consumption of goods and services. Since 1950, NSSO, headed by the Director General, has conducted large-scale nationwide surveys on socio-economic subjects and the Annual Survey of Industries (ASI). It operates under the Ministry of Statistics and Programme Implementation.

**88. Ans: (d)**

- The Capgemini Research Institute's recently published World Wealth Report 2024.
- Wealth bands include Ultra-HNWIs (\$30 million or more), Mid-Tier Millionaires (\$5-30 million), and Millionaires Next Door (\$1-5 million)
- Key Findings: India saw a 12.2% increase in the HNWI population, reaching more than 3 million,

with over 12% growth in financial wealth to \$1,445 billion.

**89. Ans: (a)**

- UNESCO has launched the Greening Curriculum Guidance (GCG) and Green School Quality Standards (GSQS) under the Greening Education Partnership.

**90. Ans: (b)**

- The 16th meeting of the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) concluded
- An inclusive framework on BEPS is finalizing negotiations on Pillar One, while the Global Minimum Tax under Pillar Two is being implemented in countries globally
- **What is an Inclusive Framework?**
  - ♦ The OECD/G20 Inclusive Framework on BEPS, with 147 countries and jurisdictions including India, fights tax avoidance and promotes fair tax practices through a Two-pillar approach: Pillar One reallocates profits of large MNEs, while Pillar Two establishes a Global Minimum Corporate Tax of 15%. This framework ensures fairness in tax systems, addresses tax avoidance, and adapts to evolving business models and digital economies.
- **What is BEPS?**
  - ♦ It refers to corporate tax planning strategies used by multinationals to shift profits from higher-tax jurisdictions to lower or no-tax jurisdictions.
  - ♦ The OECD defines BEPS strategies as exploiting gaps and mismatches in tax rules. It erodes the tax base (costing countries USD 100-240 billion in lost revenue annually) of the higher-tax jurisdictions.

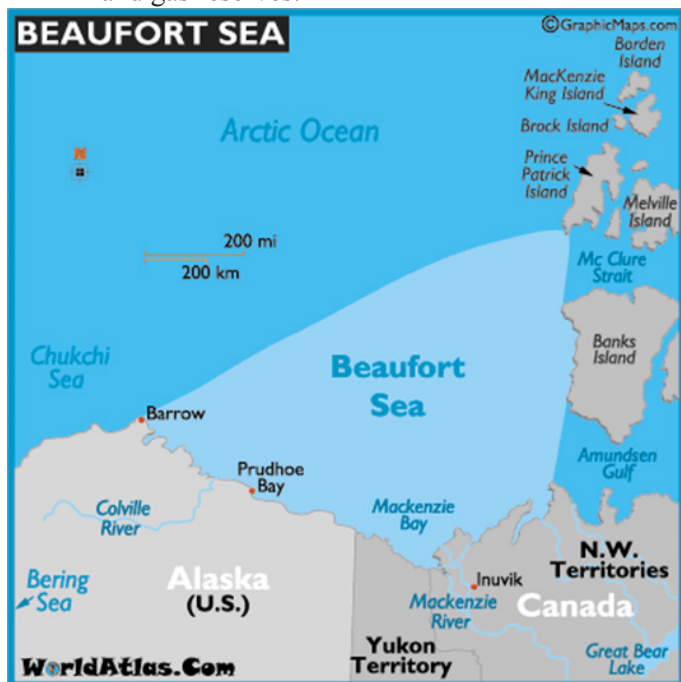
**91. Ans: (d)**

- Alaska's rivers are turning orange due to toxic metals released from thawing permafrost, a study from the University of California, Davis reveals.
1. As the earth warms, permafrost melts, exposing minerals like iron, zinc, copper, nickel, and lead, which taint the water. This phenomenon, visible even from space, has been observed since 2018 and poses concerns for aquatic life and drinking water.
- **About Alaska:**
    1. It is a state of the USA, located in the extreme northwest of North America, bounded by the Beaufort Sea, Arctic Ocean, Gulf of Alaska, Pacific Ocean, Bering Sea, and Chukchi Sea. It shares a land boundary with Canada and a maritime boundary with Russia.



92. Ans: (b)

- The Beaufort Sea is indeed located in the Arctic Ocean.
- The Beaufort Sea is bordered by the coastlines of Canada and the United States (specifically Alaska), not Russia.
- The Mackenzie River, the longest river in Canada, empties into the Beaufort Sea.
- The Beaufort Sea is known for its significant oil and gas reserves.



93. Ans: (b)

- India has assumed the chair of the Colombo Process for 2024-26, the first time since the forum's inception in 2003.
  - **About Colombo Process**
1. The Colombo Process is a Regional Consultative Process focused on managing overseas employment and contractual labour. It comprises 12 Asian member states, including Bangladesh and Sri Lanka, with India as a founding member. Priority areas include skills and qualification recognition and fostering ethical recruitment practices. The UN's International Organization for Migration provides technical and administrative support.

94. Ans: (c)

- The Reserve Bank of India (RBI) launched three major initiatives.
1. **G-Sec Mobile App:** Enables retail investors to transact in government securities (G-Secs) using smartphones.
  2. **PRAVAAH Portal:** A centralized web-based platform for individuals or entities to apply for authorizations, licenses, or regulatory approvals from the RBI, enhancing efficiency in processing applications.
  3. **Fintech Repository:** A data storehouse for Indian FinTech firms to help understand the sector better and design appropriate policies. Additionally, the EmTech Repository for RBI-regulated entities will track the adoption of emerging technologies like AI and blockchain.

95. Ans: (b)

- In Koraput district, Odisha, 4,000 tribal farmers are facing a critical delay as they await approval from the forest department to sell kendu leaves worth Rs 34 lakh.
  - **About Kendu Leaf:**
1. Kendu leaf, known as the green gold of Odisha, is a nationalized product like bamboo and sal seed. It is a vital non-wood forest product, also referred to as tendu leaf, used for rolling bidis (local cigarettes). Major producing states include Madhya Pradesh, Chhattisgarh, Odisha, Andhra Pradesh, Jharkhand, Gujarat, and Maharashtra, with Odisha being the third-largest producer.

96. Ans: (c)

- S1: Gamma-ray bursts are indeed the brightest electromagnetic events known.
- S2: GRBs are associated with supernova explosions and the collapse of massive stars.

97. Ans: (b)

- Japanese researchers from Kyoto University and Sumitomo Forestry have developed the world's first wooden satellite, LignoSat.
- This tiny cuboid craft, made from magnolia wood, measures 10 centimetres on each side and will be launched on a SpaceX rocket in September. The wooden material is expected to burn up completely upon re-entry, avoiding the creation of harmful metal particles.

98. Ans: (c)

- Recently, the Defence Research & Development Organisation (DRDO) successfully flight-tested the RudraM-II air-to-surface missile from a Su-30 MK-I aircraft of the Indian Air Force off the Odisha coast.
  - **About RudraM-II**
1. RudraM-II is an indigenously developed solid-propelled air-launched missile designed for air-to-surface operations by the DRDO. Following the successful 2020 test of RudraM, a new-generation anti-radiation missile (NGARM) and the first indigenous ARM of the Indian Air Force,



RudraM-II is equipped with an Inertial Navigation System (INS), Global Positioning System (GPS), and a Passive Homing Head (PHH). The PHH can detect, classify, and engage targets across a wide frequency band.

**99. Ans: (c)**

- The Nameri Tiger Reserve (NTR) is situated in the northern part of the Sonitpur district of Assam, along the foothills of Arunachal Pradesh.

**100. Ans: (b)**

**About Himalayan Serow**

- Species: Subspecies of the mainland serow (*Capricornis sumatraensis*)

- Appearance: Resembles a mix of goat, donkey, cow, and pig
- Habitat: Found at altitudes of 2,000-4,000 meters in the eastern, central, and western Himalayas
- Characteristics: Medium-sized, large head, thick neck, short limbs, long ears, dark coat
- Diet: Herbivorous
- Distribution: Restricted to the Himalayan region in Asia
- Conservation Status: Vulnerable (IUCN), CITES Appendix I, Wildlife Protection Act, 1972: Schedule I



**TRANSFORM IAS**  
Transforming Lives with Education