

DAILY MCQs COMPILATION with **EXPLANATIONS**

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NEXT IAS

DELHI CENTRE:

27-B, Pusa Road, Metro Pillar no. 118,
Near Karol Bagh Metro, New Delhi-110060
Phone: 8081300200

BHOPAL CENTRE

Plot No. 46 Zone - 2, M.P Nagar,
Bhopal - 462011
Phone: 8827664612, 8081300200

Table of Contents

❖	History, Art & Culture	3
❖	Economy	9
❖	Indian Polity & Constitution	17
❖	Geography	27
❖	Government Schemes/ Initiatives	31
❖	Defence/Internal Security.....	35
❖	International Relations	37
❖	Science & Technology	45
❖	Environment & Ecology	57
❖	Miscellaneous.....	66

HISTORY, ART & CULTURE

1. Which one of the following statements is *not* directly related to the Chhatrapati Shivaji Maharaj?
 - (a) He had a council of ministers (Asht Pradhan) to advise him on the matters of the state but he was not bound by it.
 - (b) He made his office hereditary.
 - (c) He believed in religious tolerance and gave equal respect to all religions.
 - (d) He did not assign jagirs to his civil and military officers generally.
2. Recently, a geoglyph was unearthed in Telangana. Which of the following best describes a geoglyph?
 - (a) They are circular patches of barren earth surrounded by a ring of tall grasses, largely found in the Namib Desert in southern Africa.
 - (b) It is a large stone which has been used, either alone or together with other stones, to create a structure or statue.
 - (c) These are the underwater sinkholes that are found in various parts of the world.
 - (d) They are the intentional human-made renderings usually made by removing or clearing sand or stones or sometimes adding stones.
3. Which of the following cities was recently added to UNESCO's Creative Cities Network (UCCN)?
 - (a) Gwalior
 - (b) Junagadh
 - (c) Chittor
 - (d) Rishikesh
4. With reference to the Ulgulan or the Great Tumult Which of the following statements is/are correct?
 1. It is a tribal movement led by the santhal tribes against the British.
 2. The movement led to the introduction of the Chotanagpur Tenancy Act in 1908.Select the correct answer using the code given below:
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
5. He was an Italian Jesuit missionary and Tamil scholar. He dressed like a Hindu sanyasi and travelled in a palanquin with a tiger skin to sit upon. He also studied Sanskrit, Telugu, and Tamil assiduously and became a master of these languages. He had acted as Dewan of Chanda Sahib, Nawab of the Carnatic.

Who among the following personalities is associated with the above description ?

- (a) Abu Abdullah Muhammad Ibn Battuta
- (b) Constantine Joseph Beschi
- (c) Roberto de Nobili
- (d) Girolamo Aleandro

6. With reference to the Doctrine of Lapse, consider the following statements:

- 1. It was formalised by the Governor General Lord Dalhousie.
- 2. The princely states of Satara and Udaipur were annexed by the East India Company as per the doctrine.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

7. He was born at Guru Ke Mahal in Amritsar in 1621. He became the ninth Sikh Guru. He was publicly killed in 1675 on the orders of Mughal emperor Aurangzeb in Delhi as he resisted forced conversions of non-Muslims to Islam during Aurangzeb's rule.

- (a) Guru Angad
- (b) Guru Hargobind
- (c) Guru Tegh Bahadur
- (d) Guru Gobind Singh

8. *Kambala Festival* is celebrated in which of the following states?

- (a) Madhya Pradesh
- (b) Karnataka
- (c) Maharashtra
- (d) Assam

9. With reference to the, Guru Nanak Dev, consider the following statements:

- 1. He was Contemporary to the Mughal Emperor Jahangir.
- 2. He advocated Nirguna form of bhakti.
- 3. He was the founder of Sikhism which was influenced by the Bhakti Movement.

How many statements given above are not correct?

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

10. It is a popular dance form primarily performed by the members of a nomadic group of snake charmers. The dance is typically performed by a group of women accompanied by male musicians. The dancers wear brightly colored skirts, blouses, and heavy jewelry while the male musicians typically play the dhol (a drum), the pungi (a snake charmer's pipe), and the khanjari (a tambourine).

Which of the following dance forms has been described above?

- (a) Lavani
- (b) Kalbelia
- (c) Ghoomar
- (d) Bhavai

11. Janjatiya Gaurav Diwas is observed in honor of which of the following?

- (a) Remembrance of martyrs of Santhal Revolt
- (b) Bestowing of title 'Rani' to Naga chieftain Rani Gaidhinlieu.
- (c) 1857 Sepoy Mutiny.
- (d) Birth anniversary of tribal freedom fighter, Birsa Munda.

EXPLANATIONS

1. (b)

Option b is correct: Chhatrapati Shivaji Maharaj, one of the most revered rulers in India and is credited to have founded the Maratha Empire in the 17th century.

Administration & Civil Rule:

- He assigned separate responsibilities to the ministers and each of them was made responsible for his work to him.
- He had a **council of ministers (Asht Pradhan)** to advise him on the matters of the state but he was not bound by it.
- He also believed in religious tolerance and gave equal respect to all religions.
- He made **no office hereditary**. Hence, **option (b) is the correct answer**.
- In general, he did **not assign jagirs to his civil and military officers**.

2. (d)

What is Geoglyph?

- A geoglyph is a work of art which is created by arranging or moving objects within a landscape. These objects are usually stones or earth.
 - They are the intentional human-made renderings.
- These are usually made by removing or clearing sand or stones or sometimes adding stones.
 - This creates the contrast between the figure and the ground, enhancing visibility.
- **'3,000yo Iron Age' geoglyph circle of Telangana**
- **Location:** The geoglyph is discovered on the outskirts of Mudichu Thalapalli in the Medchal-Malkajgiri district of Telangana.
- **Characteristics:** Etched on a low-lying granitoid hillock, the geoglyph spans 7.5 metres in diameter and has a perfect circular shape.
 - Surrounding the circle is a 30-centimetre-wide rim, and within the circle are two triangles.
- **Period:** The geoglyph has been dated back to the Iron Age, specifically around 1000 BCE.
- **Significance:** The archaeologists suggested that this circle might have served as a model for megalithic communities in planning their circular burial sites.

- The newly found geoglyph displays the artistic skills and etching techniques of Telangana's Iron Age inhabitants
- Archaeologists have termed it a first-of-its-kind discovery in Telangana.

3. (a)

Gwalior city of Madhya Pradesh was recently added to **UNESCO's Creative Cities Network (UCCN)** for its "strong commitment to harnessing culture and creativity".

- Gwalior Gharana is the oldest and one of the most influential musical gharanas in the history of Hindustani classical music.
- UNESCO's Creative Cities Network (UCCN) was launched in 2004 by UNESCO (United Nations Educational, Scientific and Cultural Organization).
- Promotes Cooperation: Aims to promote collaboration among cities recognizing creativity as crucial for sustainable urban development.

4. (b)

Statement 1 is not correct and 2 is correct.

Munda Rebellion

- It was the tribal movement led by **Birsa Munda** against the oppressions of the British Raj. It is also referred to as '**Ulgulan**' or the '**Great Tumult**'.
- Munda used traditional symbols and language to rouse people and urged them to destroy the dikus.
 - **Dikus** was the name given to the outsiders like the British, moneylenders and traders.
- **Outcomes:** The British government introduced the **Chotanagpur Tenancy Act** in **1908**, to prohibit the transfer of tribal land to non-tribals (Dikus).

5. (b)

Constantine Joseph Beschi was the **Italian Jesuit missionary** and **Tamil scholar**

- He was known as **Veeramamunivar**.
- He dressed like a Hindu sanyasi and travelled in a palanquin with a tiger skin to sit upon.
- He arrived in **Goa in 1700** and abstained from the "use of flesh and fish" and employed two Tamil youths to dress his food according to the Hindu custom.
- **Responsibilities:** He had acted as **Dewan of Chanda Sahib** and he retained the habit of a religious devotee.
- Chanda Sahib also gifted him four villages — Bokalur, Malwav, Arasur and Nullur — north of the Kollidam in Tiruchi district, yielding a net revenue of ₹12,000 a year.
- He also studied Sanskrit, Telugu, and Tamil assiduously and became a master of these languages, especially Tamil.
 - He was known as Thairiyanathaswamy and its translation reads as Veeramamunivar.
- He considered **Chanda Sahib as the ruler of the banks of the Cauvery**.
 - As per the guidelines of the missionary works of the Society of Jesus (Jesuits), he found Chanda Sahib a good source for his work.
- His principal efforts were directed towards the conversion of the Idolaters.
 - He delved deep into Tirukkural, Naladiyar, Civaka Cintamani, and other celebrated Hindu works.

6. (c)

Both the statements are correct: Doctrine of Lapse

- The doctrine held that if a princely state's ruler died heirless, it would fall under British East India Company control. Though formalized by the **Governor General Lord Dalhousie (1848-1856)**, the concept originated with the Court of Directors in 1847. Several states were annexed accordingly before Dalhousie's declaration.
- **Annexed Areas: Satara (1848)**, Sambalpur (1850), **Udaipur (1852)**, Nagpur (1853) and Jhansi (1854). Finally, in 1856, the Company also took over Awadh.

7. (c)

About Guru Tegh Bahadur

- **Born:** At Guru ke Mahal, Amritsar in 1621. He became the ninth Sikh Guru.
- Fifth & youngest son of Guru Hargobind Sahib.
- **Contributions:**
 - Resisted forced conversions of non-Muslims to Islam
 - Contributed hymns to Guru Granth Sahib.
 - Set up community kitchens and wells for the local people wherever he went.
 - Founded Chak-Nanki in Punjab (now Anandpur Sahib).
- **Death:** Publicly killed in Delhi in 1675 on Aurangzeb's order.
 - Sis Ganj Sahib (execution site) & Rakab Ganj Sahib (cremation site) in Delhi.

8. (b)

Kambala is an **annual festival** celebrated in the **Dakshina Kannada district** of Karnataka.

- The festival involves the **traditional buffalo race**, a popular and unique sport among the **farming community** of the state.
- Kambala is usually held **after the southwest monsoon**, once the paddy is harvested.
- It starts in November and lasts till March/April.

9. (a)

Statement 1 is not correct, and statements 2 and 3 are correct.

Guru Nanak Dev

- **Early Life:** Born at Rai Bhoi Ki Talwandi, near Lahore.
- **Founder of Sikhism:** He was the first of the 10 Sikh Gurus and the founder of Sikhism in the 15th century. He started writing the Guru Granth Sahib & completed 974 hymns.
- **His Teachings:** Advocated **Nirguna** (devotion to and worship of formless divine) form of bhakti.
- Advocated the existence of one God and taught to reach out to God through meditation and other pious practices.
- He set up rules for congregational worship (Sangat).
- His verses also preach selfless service to humanity irrespective of differences. The Nankana Sahib Gurdwara was built at his birthplace in the Punjab province of Pakistan.
- He was Contemporary to the Mughal Emperor **Babur**.

10. (b)

Kalbeliya is a popular dance form from **Rajasthan**, which is primarily performed by the members of the **Kalbeliyas, a nomadic group of snake charmers and dancers.**

- The dance is distinguished by its **acrobatic and energising movements**, as well as by its vibrant attire and accessories.
- The Kalbelia dance is typically **performed by a group of women accompanied by male musicians.**
- The dancers wear brightly colored skirts, blouses, and heavy jewelry. The male musicians typically play the **dhol (a drum), the pungi (a snake charmer's pipe), and the khanjari (a tambourine).**

11. (d)**Janjatiya Gaurav Diwas**

- It is observed to honor the birth anniversary of the tribal freedom fighter, **Birsa Munda.**
- He was an Indian freedom fighter, religious leader and folk hero from the Munda Tribe in the Chhota Nagpur Plateau area.

ECONOMY

1. Consider the following statements with respect to working hours in India as per the new Labour Codes:

1. Weekly and daily working hours are capped at 48 hours and 12 hours, respectively.
2. Maximum overtime hours for workers increased to 70 hours through the new codes.
3. The overtime policy prohibits employers from contacting workers on weekends.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 only
- (d) 1, 2 and 3

2. Consider the following statements:

1. National Coal Index (NCI) is meant to encompass all transactions of raw coal in the Indian market.
2. National Coal Index (NCI) upward movement indicates falling demand for coal.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

3. Which of the following statements is/are correct regarding Corporate Social Responsibility (CSR)?

1. Companies have to disclose their CSR spending annually to the Corporate Affairs Ministry (MCA) through filing of an annual report.
2. The Companies Act encourages companies to spend 2% of their average net profit in the previous three years on CSR activities.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

4. With reference to the Energy Conservation Building Code (ECBC) of India, consider the following statements:

1. It was launched by the Ministry of Environment, Forest and Climate Change in 2007.
2. It defines norms of energy performance for various building components, and takes into consideration the climatic region.
3. States across India don't have the flexibility to modify the code.

How many of the above statements are correct?

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

5. Which of the following best describes the 'Risk weight'?

- (a) It is any resource owned or controlled by a business or an economic entity.
- (b) It is a borrower's pledge of specific property to a lender, to secure repayment of a loan.
- (c) The interest rate on the note remains the same through the term of the loan.
- (d) It is the capital banks keep aside as provisioning to cover any loan defaults.

6. Consider the following statements with reference to the World Energy Employment 2023 report.

1. It is published annually by the World Economic Forum (WEF).
2. First time employment data for the extraction of copper and lithium is included in the WEE 2023 report.
3. India and the Middle East were the only major regions to see growth in both clean energy and fossil fuel employment in the 2019-22 period.

How many of the statements given above are correct?

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

7. US has recently decided to withdraw from the Joint Statement Initiative (JSI) on e-commerce. JSI on e-commerce comes under the aegis of which of the following?

- (a) Organisation for Economic Co-operation and Development (OECD)
- (b) World Trade Organization (WTO)
- (c) G20
- (d) International Economic Development Council (IEDC)

8. With reference to the Millets, which of the following statements is/are correct?

1. It is grown in tropical as well as subtropical climate with a mean temperature range of 26-29°C.
2. They can only be grown in sandy and saline soil.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

9. Consider the following statements:

1. India is the largest producer of Sugar in the world.
2. South India has a higher yield of sugarcane per unit area as compared to north India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

10. With reference to the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), consider the following statements:

1. The scheme guarantees at least 100 days of wage employment in a financial year to every household.
2. If the government fails to give employment within 15 days, the person is entitled to receive unemployment allowances.
3. It provides both skilled and unskilled employment.

How many of the statements given above are correct?

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

11. Which of the following are the possible benefits of 'Dollarization'?

1. It acts as a solution to hyperinflation for the country.
2. It may incentivise the economy to focus on export successes.
3. It makes the balance of payments less prone to crises.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

12. With reference to the Dairy Sector in India, consider the following statements:

1. India is the largest producer of milk in the world.
2. Operation Flood was a significant dairy development program implemented to enhance milk production.
3. Dr. Verghese Kurien is known as the Father of the White Revolution.

How many of the statements given above are correct?

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

13. With reference to Dayapar Wind project, Consider the following statements

1. It is a 50 MW offshore wind power project in Tamil Nadu.
2. It is the first project of NTPC REL and the first capacity in India to be declared commercial.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

EXPLANATIONS

1. (a)

The new Labour Codes brought the following changes in the working hours in India:

- **Weekly and daily working hours** are capped at **48 hours and 12 hours**, respectively. **Hence statement 1 is correct.**
 - **4-day work week will be feasible**; 12 hour working day for each of the 4 days of the week.
- **Maximum overtime hours** for workers increased from 50 hours in the Factories Act to 125 hours through the new codes. **Hence statement 2 is incorrect.**
 - The **overtime policy** also allows employers to contact workers on weekends, **as per requirement. Hence statement 3 is incorrect.**

2. (a)

In News: National Coal Index Increased by 3.83 points in September.

- This incline was influenced by temporary rise of coal prices in global markets.

Statement 1 is correct : National Coal Index (NCI) was rolled out on 4th June 2020 by the **Ministry of Coal** and it is a price index which reflects the change in price of coal in a particular month relative to the fixed base year.

The NCI is used to determine the Premium (on a per tonne basis) or Revenue Share (on a percentage basis) based on a market-based mechanism.

- The Index is meant to encompass all **transactions of raw coal in the Indian market**. This includes coking and non-coking of various grades transacted in the regulated (power and fertilizer) and non-regulated sectors. The transactions include those at notified price, coal auctions and coal imports.

Statement 2 is not correct : The NCI's upward **movement indicates rising demand for coal because of the upcoming festive season** and winter in the country, which will encourage coal producers to take maximum benefit by further scaling-up domestic coal production to meet the growing energy demands.

3. (c)

Corporate Social Responsibility (CSR)

- The CSR concept in India is **governed by Section 135 of the Companies Act, 2013**, Schedule VII of the Act and **Companies (CSR Policy) Rules, 2014**.
- The Companies Act encourages companies to **spend 2% of their average net profit in the previous three years on CSR activities**. Hence statement 2 is correct.
- It is a management concept whereby companies integrate **social and environmental concerns** in their business operations and interactions with their stakeholders.

- **Monitoring and report filing:**

- Under the existing regulation, monitoring is by a board-led, **disclosure-based regime**, with companies reporting their CSR spends **annually to the Corporate Affairs Ministry (MCA)** through **filing of an annual report**. Hence **statement 1 is correct**.

4. (a)

Statement 1 is not correct: Energy Conservation Building Code (ECBC) was launched by the Ministry of Power (MoP) in **2007**, as the first step towards **promoting energy efficiency in the commercial building sector**.

Statement 2 is correct: It defines **norms of energy performance** for various building components, and takes into consideration the climatic region.

- The code is applicable to commercial buildings like hospitals, hotels, schools, shopping complexes, and multiplexes which have a connected load of 100 kW or more, or contract demand of 120 kVA or more.

Statement 3 is not correct: Currently, **23 states** have notified rules to enforce ECBC compliance, while large states like Maharashtra and Gujarat are still in the process of drafting rules.

- While ECBC acts as a national standard, states across India have the **flexibility to modify** the code depending on unique regional needs.
- To enforce the code, **states have to draft rules and notify them** as state laws.

5. (d)

RBI's direction to increase Risk weight

- **Rise in unsecured loans:**

- Indian banks have seen a **sharp rise in unsecured loans**, mostly personal loans and credit cards that has outpaced the overall bank credit growth of about 15 per cent over the past year.

- **The regulation by RBI:**

- To address the build-up of risks and institute safeguards to stave off stress in the banking system, the Reserve Bank of India (RBI) has recently **increased the risk weights** on the exposure of banks to consumer credit, credit card receivables and non-banking finance companies (NBFCs) by 25 percentage points up to 150 per cent.
- Housing loans, education loans, vehicle loans and loans secured by gold and gold jewellery are excluded from this hike.
- **What is the Risk weight?**
 - ♦ Risk weight refers to the capital banks keep aside as provisioning to cover any loan defaults.

6. (b)

Statement 1 is not correct : World Energy Employment 2023 recently released by the International Energy Agency (IEA).

Statements 2 and 3 are correct : **World Energy Employment 2023** is published **annually** and the **second edition of the World Energy Employment report** maps energy sector employment by **region, fuel, technology, and value chain**.

- It provides a data-rich foundation for policy makers, industry, labour, and educators to understand the labour-related impacts of clean energy transitions.

- WEE 2023 includes **for the first time employment data** for the extraction of selected critical minerals, including **copper, cobalt, nickel and lithium**.
- **Global energy employment rose to 67 million people in 2022**, an increase of 3.5 million from pre-pandemic levels.
- China is home to the largest energy workforce today with nearly 30% of the global total, witnessing the largest rebalancing over the 2019-22 period.
 - In India, fossil fuel employment rose above pre-pandemic levels of 2019.
 - ♦ India and the Middle East were the only major regions to see growth in both clean energy and fossil fuel employment in the 2019-22 period.

7. (b)

WTO's Joint Initiative on E-commerce

- A group of 71 WTO members agreed at the **11th Ministerial Conference** in December 2017 to initiate **exploratory work towards future WTO negotiations** on trade-related aspects of e-commerce.
- In January 2019, 76 WTO members confirmed in a joint statement their intention to commence these negotiations.
- They agreed to "seek to achieve a high standard outcome that builds on existing WTO agreements and frameworks with the participation of as many WTO members as possible".

8. (a)

Statement 1 is correct and 2 is not correct.

Condition for Millets (Shree Anna) Cultivation

- **Climate:** The Millets are grown in tropical as well as subtropical up to an altitude of 2,100 m. A mean temperature range of 26-29°C during the growth is best for proper development and good crop yield.
- **Soil:** Millet has wide adaptability to different soil from very poor to very fertile and can tolerate a certain degree of alkalinity. The best soils are alluvial, loamy and sandy soil with good drainage

9. (b)

Statement 1 is not correct: India has been the largest consumer (**15% share**) and **second largest producer** of sugar (**20% share**) in the world, **Brazil** is the largest producer of sugar in the world.

Statement 2 is correct: **South India** has a tropical climate which is suitable for higher sucrose content giving higher yield per unit area as compared to north India.

10. (b)

Statement 1 and 2 are correct: Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

- It is an employment generation programme, implemented with the enforcement of the National Rural Employment Guarantee Act 2005 (NREGA).
- It was introduced in 2005 with the aim of providing livelihood and employment security in rural areas.
- **Employment Guarantee:** The scheme guarantees at least 100 days of wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

- **Unemployment Allowance:** If the government fails to give employment within 15 days, the person is entitled to receive unemployment allowances at the rate of $\frac{1}{4}$ of the daily wage for the first 30 days and thence $\frac{1}{2}$ per day beyond that.

Statement 3 is not correct: Limited Skill Development: MGNREGS primarily focuses on providing **unskilled manual labor**, and there is a lack of emphasis on skill development. This can limit the long-term impact of the program on improving the employability of the rural workforce.

11. (d)

Dollarization

- Dollarization is the term for when the U.S. dollar is used in addition to or instead of the domestic currency of another country.
- It is an example of **currency substitution**.
- Dollarization usually happens when a country's own currency loses its usefulness as a medium of exchange, due to hyperinflation or instability.
- **Benefits of Dollarisation:**
 - **Solution to hyperinflation: Hence option 1 is correct.**
 - ♦ Dollarisation can act as a solution to hyperinflation by **breaking the feedback link** between **rising prices** and **rising money supply**.
 - ♦ **How?** If the domestic currency is replaced by dollars, money supply can no longer be controlled by vested political interests who can increase spending for political ends.
 - The incessant rise of prices would be forced to moderate since consumers would no longer be able to access currency easily, thus slowing down consumption demand.
 - **Positive effects on growth: Hence option 2 is correct.**
 - ♦ Since a **small economy** can only access dollars through **foreign trade and/or capital inflows**, it would incentivise the economy to focus on **export successes** and easing conditions for **foreign capital**, who would be more willing to invest in an economy with a **stable currency**.
 - ♦ It creates positive investor sentiment, almost extinguishing speculative attacks on the local currency and the exchange rate.
- **Stability:**
 - The stable value of the dollar would ensure that economic agents —both foreign and domestic — would be able to make **long-term plans** regarding economic activity, plans that would otherwise not be possible under a currency that rapidly lost value.
- **Integration into the global economy: Hence option 3 is correct.**
 - Full dollarization can improve the global economy by allowing for easier integration of economies into the world's market.
 - The result is a more stable capital market, the end of sudden capital outflows, and a balance of payments less prone to crises.

12. (c)

All three statements are correct: White Revolution

- **Production:** India is the largest producer of milk in the world, contributing **24% of global milk production in 2021-22**.

- The White Revolution in India, also known as **Operation Flood**, was a significant dairy development program implemented to enhance milk production and address the country's milk scarcity issues.
- It was launched in **1970** by the **National Dairy Development Board (NDDB)** under the leadership of **Dr. Verghese Kurien**, often referred to as the "**Father of the White Revolution.**"

13. (b)

In News: NTPC Renewable Energy Limited has declared the commercial operation of the Dayapar Wind project.

Statement 1 is not correct but statement 2 is correct: Dayapar Wind project is a 50 MW wind project at **Dayapar in Kachchh, Gujarat.**

- Dayapar Wind is the **first project of NTPC REL** and the **first capacity in India to be declared commercial** under new Indian Electricity Grid Code and General Network Access Regime.
 - With this, the total installed capacity of NTPC Group has become 73,874 MW and the total RE operational capacity of NTPC Group now stands at 3,364 MW.

INDIAN POLITY & CONSTITUTION

1. With reference to the Parliamentary Committees, consider the following statements:
 1. Ad hoc Committees are appointed for a specific purpose and they cease to exist when they finish the task.
 2. Parliament is bound by the recommendations of committees.
 3. They act as a mechanism that helps in improving the effectiveness of Parliament.How many statements given above are correct?
 - (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
2. With reference to the Privileges Committee which of the following statements is/are correct?
 1. It is an Ad Hoc Committee which ceases to exist on completion of the task assigned to them.
 2. The Committee examines the cases of breach of privileges of the Lok Sabha members only.Select the correct answer using the code given below:
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
3. Consider the followings statements with reference to Lokpal of India:
 1. It is the first institution of its kind in independent India, established under the Lokpal and Lokayuktas Act 2013.
 2. It consists of a Chairperson and eight Members out of whom 25% are Judicial Members.
 3. It has jurisdiction to inquire into allegations of corruption against anyone except the Prime Minister.How many of the above statements are correct?
 - (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
4. With reference to the '*Central Board of Film Certification (CBFC)*', consider the following statements:
 1. It is a regulatory and non-statutory body under the Union Ministry of Information and Broadcasting.

2. Films can be publicly exhibited in India only after certification by CBFC.
3. It consists of a Chairman and non-official members all of whom are appointed by the Union Government.

How many of the statements given above are correct?

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

5. With reference to Right to Information Act 2005, consider the following statements:

1. The law is applicable to Government at all levels- Union, State and Local.
2. The Central Public Information Officer is supposed to interpret information; or to solve the problems raised by the applicants.
3. The Act gives the citizens a right to information at par with the Members of Parliament.

How many statements given above are correct?

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

6. With reference to Central Bureau of Investigation (CBI), consider the following statements:

1. CBI traces its origin to the Special Police Establishment (SPE) which was set up in 1941.
2. The jurisdiction of CBI can not be extended by the Central Government to other areas including Railways.
3. The CBI is designated as the National Central Bureau of India for ICPO-INTERPOL.
4. Lokpal has power of superintendence and direction over CBI.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

7. Consider the following statements, with reference to the Digital Advertisement Policy, 2023:

1. It was approved by the Ministry of Communications to undertake campaigns in the Digital Media Space.
2. It introduces competitive bidding for rate discovery which will remain valid for ten years.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

8. With reference to the *Ordinance-making power of the Governor*, consider the following statements:

1. It is a discretionary power of the Governor.
2. The governor can withdraw an ordinance only on the advice of the Council of Ministers.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

9. Which of the following provisions is/are included in the Model Prisons act 2023?

1. Separate accommodation for women prisoners and transgender.
2. Legal aid to prisoners and premature release.
3. Punishment for jail staff for use of mobile phones in jails.

How many of the above statements are correct?

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

10. With reference to the Central Bureau of Communication, consider the following statements:

1. It acts as an advisory body to the Government on Media Strategy.
2. It provides communication solutions to Ministries, Departments, Public Sector Undertakings, and autonomous bodies in India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

11. Which of the following Pardoning Powers “Means changing the type of punishment given to the guilty into a less harsh one”?

- (a) Commutation
- (b) Reprieve
- (c) Respite
- (d) Remission

12. With reference to the Particularly Vulnerable Tribal Groups (PVTGs), consider the following statements:

1. In 1973, the Dhebar Commission set up a separate category for Primitive Tribal Groups (PTGs).
2. According to the 2011 Census, Madhya Pradesh has the largest population of PVTGs.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

13. The right to carry on any occupation, trade or business is guaranteed under which of the following Articles of the Indian Constitution?
- (a) Article 21
 - (b) Article 19
 - (c) Article 29
 - (d) Article 31

14. With respect to a Bill passed by the Legislative Assembly of a State, consider the following statements:
- 1. The Governor may either assent to the Bill or withhold his assent.
 - 2. If the Governor withholds his assent, he should return the Bill within 30 days requesting the Legislative Assembly to reconsider the proposed law.
 - 3. A Bill can be reserved for the President's consideration if the Governor is of the opinion that the Bill would endanger the Governor's position.

How many of the statements given above are correct?

- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
15. With reference to the Pharmacy Act of 1948, consider the following statements:
- 1. It regulates the clinical trials of the Drugs.
 - 2. Pharmacy Council of India is constituted under the Act.

Which of the statements given above is/are correct?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
16. With reference to the Special Category Status (SCS) to states in India, consider the following statements:
- 1. It was named Gadgil Formula after the name of then Deputy Chairman of the Planning Commission.
 - 2. Jammu & Kashmir, Manipur and Meghalaya were the first three states to be granted the status.
 - 3. It was discontinued on the recommendations of the 15th Finance Commission.

How many of the statements given above are correct?

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

17. Consider the following statements:

1. Governors of the state can exercise their discretionary powers while withholding assent to the State Legislature.
2. The Constitution does not lay down any time limit within which the Governor is required to make a decision on the bill presented for their assent.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

EXPLANATIONS

1. (b)

Statement 1 is correct: A Parliamentary Committee is a **panel of MPs** that is appointed or elected by the House or nominated by the Speaker, and which works under the **direction of the Speaker**.

- **Ad hoc Committees:** They are appointed for a **specific purpose** and they cease to exist when they finish the task assigned to them and submit a report.

Statement 2 is not correct: Bills that are referred to committees are returned to the House with significant value addition.

- Parliament is **not bound** by the recommendations of committees.

Statement 3 is correct: Parliamentary Committees act as a mechanism that helps in improving the **effectiveness of Parliament**.

- They also examine petitions from the public, check whether rules framed by the government are in consonance with Acts of Parliament, and **help manage the administration of Parliament**.

2. (d)

Both the statements are not correct.

- The Committee examines the cases of breach of privileges of the House and its members and recommends appropriate action. The functions of this committee are **semi-judicial in nature**.
- It is a **standing committee** which is permanent in nature.
- The mandate of the Privileges Committee is to safeguard the “freedom, authority, and dignity of Parliament”. These privileges are enjoyed by individual Members as well as the House as a whole.
- The Lok Sabha committee has **15 members**, while the Rajya Sabha committee has **10 members**.

3. (a)

In News: The Lokpal of India has ruled that it does not have the jurisdiction to entertain a plea filed by the wife of a government official in Uttar Pradesh who died by suicide.

Statement 1 is correct : The Lokpal is the first institution of its kind in independent India, established under the Lokpal and Lokayuktas Act 2013 to inquire and investigate allegations of corruption against public functionaries who fall within the scope and ambit of the above Act.

Statements 2 and 3 are not correct: The Lokpal consists of a Chairperson and eight Members out of whom **50% are Judicial Members**.

- The Lokpal has jurisdiction to inquire into allegations of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union Government under Groups A, B, C and D.
 - Also covered are chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Union or State government. It also covers any society or trust or body that receives foreign contributions above ₹10 lakh (approx. US\$ 14,300/- as of 2019).

4. (b)

Cinematograph (Amendment) Bill 2023 amended the Cinematograph Act, 1952 with the aim to constitute the **Central Board of Film Certification (CBFC)** for certifying films for exhibition.

- **Statement 1 is not correct:** Central Board of Film Certification (CBFC) is a **statutory body under the Ministry of Information and Broadcasting**, regulating the public exhibition of films under the provisions of the Cinematograph Act 1952.
- **Statement 2 is correct:** Films can be publicly exhibited in India only after they have been certified by the Central Board of Film Certification.
- **Statement 3 is correct:** The Board **consists of non-official members and a Chairman (all of whom are appointed by Central Government)** and functions with headquarters at **Mumbai**.
 - It has **nine Regional offices**, one each at Mumbai, Kolkata, Chennai, Bangalore, Thiruvananthapuram, Hyderabad, New Delhi, Cuttack and Guwahati.

5. (b)

Statement 1 is correct: Right to Information Act 2005, was **promulgated in 2005** to promote transparency and accountability in the working of every public authority.

- The law is applicable **to Government at all levels**- Union, State and Local as well as recipients of government grants.

Statement 2 is not correct: The Central Public Information Officer **is not supposed** to create information; or to interpret information; or to solve the problems raised by the applicants; or to furnish replies to hypothetical questions.

Statement 3 is correct: The Act gives the citizens a right to information at par with the Members of Parliament and the Members of State Legislatures.

6. (c)

In News: The Centre claimed in the Supreme Court that the **Central Bureau of Investigation (CBI)** is its own boss and the **Union government has no control** whatsoever over the probe agency in the registration, investigation and prosecution of cases.

Statements 1, 3 and 4 are correct: **Central Bureau of Investigation (CBI)** is the **premier investigating police agency** in India. It is an **elite force** playing a major role in preservation of values in public life and in ensuring the health of the national economy.

- It is also the nodal police agency in India, which coordinates investigations on behalf of Interpol Member countries.
- CBI, functioning under **Dept. of Personnel, Ministry of Personnel, Pension & Public Grievances**, Government of India
- **CBI traces its origin to the Special Police Establishment (SPE)** which was set up in 1941 by the Government of India.
- CBI has also the experience of handling high profile conventional crimes, economic offences, banking frauds and crimes with international linkages.

- The CBI is designated as the **National Central Bureau of India for ICPO-INTERPOL**.
- **Lokpal will have power of superintendence and direction** over any central investigation agency including CBI for cases referred to them by the Lokpal.

Statement 2 is not correct: CBI derives power to investigate from the Delhi Special Police Establishment Act, 1946 Section 2 of the Act vests DSPE with jurisdiction to investigate offences in the Union Territories only.

- However, the **jurisdiction can be extended by the Central Government to other areas including Railway areas and States under Section 5(1)** of the Act, provided the State Government accords consent under Section 6 of the Act.

7. (d)

Statement 1 is not correct : The **Ministry of Information and Broadcasting** approved "**Digital Advertisement Policy, 2023** to enable and empower the **Central Bureau of Communication** to undertake campaigns in the **Digital Media Space**.

- It has been formulated after wide ranging discussions with multiple stakeholders and outlines the roadmap of enhancing the **Digital Outreach of the Government of India** and **improving information dissemination to the Citizens**.

Statement 2 is not correct: Digital Advertisement Policy, 2023 introduces **competitive bidding** for rate discovery, ensuring transparency and efficiency.

- Rates discovered through this process will **remain valid for three years** and will be applicable to all eligible agencies.
- It marks a pivotal moment in CBC's mission to **disseminate information** and **create awareness** regarding various schemes, programs, and policies of the Government of India in response to the evolving media landscape and the increased digitalization of media consumption.
- The **Policy also recognizes the dynamic nature** of the digital landscape and empowers CBC to on board New and Innovative Communication Platforms in the Digital Space with the approval of a duly constituted committee.
- Apart from rationalising its process of empanelling Internet Websites, CBC now for the **first time will be able to channelize** its public service campaign messages through Mobile Applications too.
- The **policy also empowers CBC** to empanel Digital Media Agencies to enhance its outreach through the various platforms.

8. (b)

Statement 1 is not correct: The governor can promulgate or withdraw an ordinance **only on the advice of the Council of Ministers** headed by the Chief Minister.

- **Thus ordinance making power is not his own discretion.**

Statement 2 is correct: The Governor **can withdraw an ordinance only on the advice of the Council of Ministers** headed by the Chief Minister as it is not a discretionary power available to him.

9. (c)

In News: Recently, a copy of the Model Prisons and Correctional Services Act, 2023 was published for the first time on the Union Home Ministry's website.

- Ministry asked States to use **tracking devices on prison inmates released on parole**.

All the statements are correct : Some salient features of the new Model Prisons Act are as follows:

- Provision for security assessment and segregation of prisoners, individual sentence planning,
- Grievance redressal, prison development board, attitudinal change towards prisoners.

- **Provision of separate accommodation for women prisoners, transgender, etc.**
- Provision for use of technology in prison administration with a view to bring transparency in prison administration.
- Provision for video conferencing with courts, scientific and technological interventions in prisons, etc.
- **Provision for legal aid to prisoners**, provision of parole, furlough and premature release etc. to incentivise good conduct.
- Provision of punishment for prisoners and jail staff for use of **prohibited items like mobile phones etc. in jails.**
- Provision regarding establishment and management of high security jail, open jail (open and semi open), etc.
- Provision for protecting the society from the criminal activities of hardened criminals and habitual offenders, etc.

10. (c)

Statement 1 is correct: Central Bureau of Communication (CBC):

- It is a unit of the Union Ministry of Information and Broadcasting, Government of India.
- It acts as an **advisory body to the Government on media strategy**, and its chief mandate is to advance the Government's image as the prime facilitator of people's empowerment by positioning messages through Print Media, Audio-Visual, Outdoor and Digital Media.

Statement 2 is correct: It has the mandate of **providing 360 degree communication solutions** to Ministries, Departments, Public Sector Undertakings (PSUs), and autonomous bodies.

- CBC has been instrumental in creating awareness amongst masses about socio-economic themes, seeking their participation in developmental activities and for the eradication of social malpractices.

11. (a)

Pardoning Powers defined in the Constitution

- **Pardon:** Means completely absolving the person of the crime and letting him go free. The pardoned criminal will be like a normal citizen.
- **Commutation:** It means changing the type of punishment given to the guilty into a less harsh one, for example, a death penalty commuted to a life sentence.
- **Reprieve:** It means a delay allowed in the execution of a sentence, usually a death sentence, for a guilty person to allow him some time to apply for Presidential Pardon or some other legal remedy to prove his innocence or successful rehabilitation.
- **Respite:** It means reducing the quantum or degree of the punishment to a criminal given some special circumstances, like pregnancy, mental condition etc.
- **Remission:** It means changing the quantum of the punishment without changing its nature, for example reducing twenty-year rigorous imprisonment to ten years.

12. (a)

Statement 1 is correct: In 1973, the **Dhebar Commission** set up a separate category for **Primitive Tribal Groups (PTGs)**.

- In **1975**, the Union identified 52 tribal groups as PTGs.
- In **1993**, 23 more groups were added to the list. Later, in 2006, these groups were named PVTGs.

Statement 2 is not correct: According to the 2011 Census, **Odisha** has the largest population of PVTGs followed by Madhya Pradesh.

13. (b)

The right to carry on any occupation, trade or business is guaranteed under **Article 19(1)(g)** of the Indian Constitution.

- However, **this right is not absolute and is subject to reasonable restrictions** imposed by the government in the interest of the general public.
 - Nothing in the sub clause (g) shall affect the operation of any existing law in so far as it relates to, or prevent the State from making any law relating to,
 - ♦ **the professional or technical qualifications** necessary for practising any profession or carrying on any occupation, trade or business, or
 - ♦ **the carrying on by the State, or by a corporation owned or controlled by the State**, of any trade, business, industry or service, whether to the exclusion, complete or partial, of citizens or otherwise.

14. (a)

Statements 2 and 3 are not correct: When a Bill passed by both Houses of the Legislature is presented to the Governor for his assent, he is empowered under **Article 200** of the Constitution to exercise any of four alternatives:

a) **To give assent**

b) **Withhold assent**

c) **Return the Bill to the Legislative Assembly for reconsideration:** If the Governor withhold assent, he should return the Bill '**as soon as possible**,' requesting the Assembly to reconsider the proposed law. **So, statement 2 is incorrect.**

- There is **no timeline prescribed for Governors to make a decision with regard to a Bill**. This loophole is often misused to delay legislation — a manoeuvre called a '**pocket veto**'.

d) **Reserve it for the consideration of the President:** A Bill can be reserved for the President's consideration **if the Governor is of the opinion that it would endanger the position of the concerned High Court** by whittling away its powers. **So, statement 3 is incorrect.**

15. (b)

Statement 1 is not correct: Pharmacy Act of 1948: It governs the **pharmacy profession** in the country.

- The primary purpose of this act is to **regulate the education and practice of pharmacy** to ensure the quality, safety, and efficacy of drugs and pharmaceuticals.

Statement 2 is correct: The act provides for the **establishment of the Pharmacy Council of India**, a statutory body constituted in 1949, to regulate the education and practice of pharmacy in India.

16. (a)

Statement 1 is correct: Special Category Status (SCS) was introduced in **1969** when the **fifth Finance Commission** sought to provide certain disadvantaged states with **preferential treatment**.

- It was named **Gadgil Formula** after the name of then **Deputy Chairman of the Planning Commission, Dr Gadgil Mukherjee**.

Statement 2 is not correct: Initially, **three states; Assam, Nagaland and Jammu & Kashmir** were granted special status.

Statement 3 is not correct: On the recommendations of the **14th Finance Commission** Gadgil formula-based **grants were discontinued**.

17. (b)

Governor's power with respect to the Bills

- **Article 200** of the Constitution lays down that when a Bill, passed by a State Legislature, is presented to the Governor for their assent, they have four alternatives —
 - may give assent to the Bill;
 - may withhold assent to the Bill, that is, reject the Bill in which case the Bill fails to become law;
 - may return the Bill (if it is not a Money Bill) for reconsideration of the State Legislature; or
 - may reserve the Bill for the consideration of the President.
- **Matter of 'discretion':**
 - As held by the Supreme Court in various cases including the **Shamsher Singh case (1974)**, the Governor does not exercise their discretionary powers while withholding assent or returning a Bill to the State Legislature.
 - They are required to act as per the advice of the Council of Ministers. **Hence statement 1 is incorrect.**
- **Time limit:**
 - It must however be noted that the **Constitution does not lay down any time limit** within which the Governor is required to make a decision. **Hence statement 2 is correct.**

GEOGRAPHY

1. With reference to Dams in India, consider the following statements:

1. India has the highest number of large dams in the world.
2. Maharashtra has the maximum number of large dams in India.
3. Tehri Dam in Uttarakhand is the highest dam of India.

How many statements given above are correct?

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

2. Lake Titicaca which is the highest navigable lake in the world is located in which of the following?

- (a) The Plateau of Patagonian
- (b) Rocky Mountains
- (c) Cordillera Blanca Landscapes
- (d) Andes Mountains

3. With reference to Volcanoes, Consider the following pairs :

Volcanoes		Place
1. Mount Etna	:	Italy
2. Kīlauea	:	Hawaii Island
3. Mount Merapi	:	Indonesia

How many of the above pairs are correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pairs

4. Consider the following statements about 'Tantalum' which was recently seen in the news:

1. It is a rare metal with the atomic number 73.
2. It has a high melting point and anti corrosive properties.

Which of the above given statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

5. Consider the following statements:
1. The National Disaster Response Force (NDRF) was formed under the Eleventh Five Year Plan.
 2. The Prime Minister is the Chairman of the National Disaster Response Force (NDRF).
- Which of the above given statements is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
6. With reference to the Rat-hole mining which of the following statements is/are correct?
1. It involves digging of very small tunnels, usually 3-4 feet high.
 2. It is the most scientific method of mining and causes no harm to the environment.
- Select the correct answer using the code given below:
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
7. With reference to the river Mahanadi, which of the following statements is/are correct?
1. The River rises in Mahendragiri hills in the Eastern Ghats, Odisha.
 2. River Pranhita and Purna are the major tributaries of the river.
- Select the correct answer using the code given below:
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
8. With reference to the Subansiri Lower Hydroelectric Project, consider the following statements:
1. The project is located in Himachal Pradesh.
 2. Subansiri is a tributary of River Ganga.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

EXPLANATIONS

1. (b)

Statement 1 is not correct: India has 4,407 large dams, the **third highest number in the world** after China (23,841) and the USA (9,263).

Statement 2 and 3 are correct: **Maharashtra** has the maximum number of large dams followed by Madhya Pradesh and Gujarat.

- **Tehri Dam** in Uttarakhand is the **highest dam of India**.

2. (d)

In News

- Experts say that Lake Titicaca is shrinking due to climate change.

About Lake Titicaca

- **Lake Titicaca** is a large freshwater lake in the **Andes mountains** on the **border of Bolivia and Peru**.
- Lake Titicaca lies between **Andean ranges** in a vast basin that comprises most of the Altiplano (High Plateau) of the **northern Andes**.
- It is often called the **highest navigable lake in the world**.

3. (c)

All three pairs are correctly matched.

Kīlauea

- Kīlauea is an active shield volcano in the Hawaiian Islands.
- The volcano is between 210,000 and 280,000 years old and emerged above sea level about 100,000 years ago.
- Historically, it is the most active of the five volcanoes that together form the island of Hawaii.

Mount Merapi

- Mount Merapi, is an active stratovolcano located on the border between the province of Central Java and the Special Region of Yogyakarta, Indonesia.
- It is the most active volcano in Indonesia and has erupted regularly since 1548.

Mount Etna

- Mount Etna, or simply Etna, is an active stratovolcano on the east coast of Sicily, Italy.
- It is Europe's most active volcano and one of the largest in the world.

4. (c)

Both the Statements are correct: Tantalum is a rare metal with the **atomic number 73**. The metal is gray, hard and heavy, and ductile. It also possesses high corrosion resistance. The metal has a high melting point, exceeded only by tungsten and rhenium. **It is almost immune to chemical attack** at temperatures below 150°C, and is attacked only by hydrofluoric acid, acidic solutions containing the fluoride ion, and free sulfur trioxide.

5. (b)

Statement 1 is not correct: On 23 December 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA). It was the Tenth Five Year Plan document that had, for the first time, a detailed chapter on Disaster Management.

Statement 2 is correct: NDMA is headed by the Prime Minister as the ex officio chairperson. The chairperson(PM) can nominate other members to the NDMA, the total of which cannot exceed nine. The chairperson(PM) of the NDMA also has the right to nominate a vice-chairperson to the NDMA.

6. (a)

Statement 1 is correct and statement 2 is not correct.

News

- Rat-hole mining has begun to rescue the trapped workers in Uttarkashi tunnel.

What is rat-hole mining?

- The term “rat hole” refers to the narrow pits dug into the ground, typically just large enough for one person to descend and extract coal.
- The pits are usually only 3-4 feet high, which workers (often children) enter and extract coal.
- Once the pits are dug, miners descend using ropes or bamboo ladders to reach the coal seams. The coal is then manually extracted using primitive tools such as pickaxes, shovels, and baskets.

Environmental and safety concerns

- **Safety issues:** The mines are typically unregulated, lacking safety measures such as proper ventilation, structural support, or safety gear for the workers.
- **Environmental issues:** The mining process can cause land degradation, deforestation, and water pollution.
 - Rat-hole mining in **Meghalaya** had caused the water in the **Kopili river** (it flows through Meghalaya and Assam) to turn acidic.
- **Loss of lives:** This method of mining has faced severe criticism due to its hazardous working conditions, and numerous accidents leading to injuries and fatalities.

7. (d)

Both the statements are not correct.

- Mahanadi rises from Raipur district of Chhattisgarh and flows for about 851 km before its outfall into the Bay of Bengal.
- The river flows through the states of Chhattisgarh and Odisha.
- Its main tributaries are the Seonath, the Jonk, the Hasdeo, the Mand, the Ib, the Ong and the Tel.

8. (d)

Both the statements are not correct.

Subansiri Lower Hydroelectric Project is a **2GW hydropower station** being developed by India's state-run National Hydro Power Corporation (NHPC).

- The project is located on the border of **Assam and Arunachal Pradesh** on the **Subansiri River**, which is a **major tributary of the Brahmaputra River**.
- It is considered one of the largest hydroelectric projects in India.

GOVERNMENT SCHEMES/ INITIATIVES

1. Which of the following is correct regarding the PM-DAKSH Scheme?
 - (a) It is a Central Sponsored Scheme
 - (b) The Scheme is for skilling of marginalised persons
 - (c) Beneficiaries of the scheme are less than 30 years of age
 - (d) No stipend is given under this scheme
2. The Operation 'Nanhe Faristey' was seen in the news, it is related to which of the following?
 - (a) Providing free education to slum children
 - (b) Talent acquisition in sports from districts across India
 - (c) Reuniting lost children with their families
 - (d) Prevent drug abuse of children
3. With reference to the *Government e-Market (GeM) Portal*, consider the following statements:
 1. It was launched primarily for the online purchases of goods only by all the central government ministries and departments.
 2. It is the largest market platform in the world.

Which of the statements given above is/are correct?

 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
4. With reference to the Scholarships for Higher Education for Young Achievers Scheme (SHREYAS), consider the following statements:
 1. It is a centrally sponsored scheme for providing industry apprenticeship opportunities to students.
 2. It is an initiative of the Union Ministry of Finance, Government of India.

Which of the statements given above is/are correct?

 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
5. With reference to Mission Karmayogi, consider the following statements:
 1. Mission Karmayogi covers only permanent civil servants, excluding contractual employees.
 2. The mission was launched in 2020.

Choose the correct option:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of the above

6. "FASTER 2.0 portal" launched recently, with which one of the following objectives?
- (a) To promptly inform jail authorities, trial courts, and high courts about court orders for the release of prisoners.
 - (b) To speed up the ease of doing business in the country.
 - (c) To ease the availability of government services at the doorstep.
 - (d) To leverage the benefits of Artificial Intelligence and Machine Learning in the governance process.

EXPLANATIONS

1. (b)

Option b is correct: The Pradhan Mantri Dakshata Aur Kushalata Sampanna Hitgrahi (PM-DAKSH) Yojana, a Central Sector Scheme, was launched during 2020-21. Hence **Statement 1 is not correct.** The main objective of the Scheme is to enhance the competency level of the target groups to make them employable both in self-employment and wage-employment for their socio-economic development. The target group under this scheme are SCs, OBCs, EBCs, DNTs, Safai Karamcharis including waste pickers etc. **Hence statement 2 is correct.** The age criterion of scheme - between 18-45 years and income criteria - no income limit for SCs, Safai Karamcharis Including wastepicker and DNT. **Hence statement 3 is not correct.**

The Cost of the training to trainees is free of cost. The stipend under this scheme of Rs.1,500/- per month to SCs and Safai Karamcharis and Rs.1,000/- per month to OBCs/EBCs/DNTs for non-residential Short Term and Long Term training courses and the Wage compensation Rs.2500/- per candidate is given to SCs/OBCs/EBCs/DNTs candidates for Upskilling/Reskilling programme. **Hence statement 4 is not correct.**

2. (c)

In October 2023, Railway Protection Force reunited over 601 children with their families under Operation 'Nanhe Faristey'. This initiative was introduced on the Indian Railways platform. It aims to rescue and safeguard children in need of care and protection who encountered by the railway system.

3. (d)

Statement 1 is not correct: It was launched in 2016, for online purchases of goods and services by all the central government ministries and departments.

- It is hosted by the Directorate General of Supplies and Disposals (DGS&D) under the Ministry of Commerce and Industry where common user goods and services can be procured. GeM is

a dynamic, self-sustaining and user friendly portal for making procurement by Government officers.

Statement 2 is not correct: KONEPS of South Korea is the largest such platform in the world.

- Currently, **GeBIZ of Singapore** and **GeM of India** hold the second and third position respectively.

4. (d)

Statement 1 is not correct: Scholarships for Higher Education for Young Achievers Scheme (SHREYAS) is a central sector scheme for providing industry apprenticeship opportunities to the general graduates through the **National Apprenticeship Promotion Scheme (NAPS)**.

- The program aims to enhance the employability of Indian youth by providing 'on the job work exposure' and earning of stipend.

Statement 2 is not correct: SHREYAS is a programme basket comprising the **initiatives of three Central Ministries**, namely the *Ministry of Education (formerly Ministry of Human Resource Development)*, *Ministry of Skill Development & Entrepreneurship* and the *Ministry of Labour & Employment*.

5. (b)

Statement 1 is incorrect and statement 2 is correct.

About Mission Karmayogi

- It was launched in 2020 with the objective of **enhancing governance through Civil Service Capacity Building**.
- It aims to prepare civil service officers for the future by making them more "creative, constructive, imaginative, innovative, proactive, professional, progressive, energetic, enabling, transparent and technology-enabled."
- **Pillars: Mission Karmayogi will have the following six pillars:**
 - Policy Framework,
 - Institutional Framework,
 - Competency Framework,
 - Digital Learning Framework (Integrated Government Online Training Karmayogi Platform (iGOT-Karmayogi),
 - electronic Human Resource Management System (e-HRMS), and
 - Monitoring and Evaluation Framework.
- **Coverage:** It will cover all civil servants (including contractual employees) across different ministries, departments, organizations and agencies of the Union Government.
 - The willing state governments will also be enabled to align their capacity building plans on similar lines.

6. (a)

'FASTER 2.0' portal:

- The portal is designed to **promptly inform jail authorities, trial courts, and high courts** about court orders for the **release of prisoners**.

- It facilitates instant communication to the concerned authorities, **enhancing the efficiency of the justice system.**
- It looks **to plug the delay in the present system**, which currently is much time taking as it is based on physical orders copies that are to be officially received via 'formal' government channels before the jail authorities.

DEFENSE/ INTERNAL SECURITY

1. With reference to the *Colombo Security Conclave*, consider the following statements:
 1. It was formed as a trilateral maritime security grouping of India, Sri Lanka and Mauritius.
 2. Bangladesh and Maldives were included for maritime cooperation in the region.Which of the statements given above is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
2. With reference to MiG-21, consider the following statements:
 1. It is a French twin-engine multi-role fighter jet designed and built by Dassault Aviation.
 2. It is the first supersonic fighter in service of the Indian Air Force (IAF) which was inducted in 1963.Which of the statements given above is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
3. Exercise Mitra Shakti is a Military Exercise between India and which of the following countries?
 - (a) Malaysia
 - (b) Bangladesh
 - (c) Indonesia
 - (d) Sri Lanka

EXPLANATIONS

1. (d)

Statement 1 is not correct: The **Colombo Security Conclave** was formed in 2011 as a **trilateral** maritime security grouping of **India, Sri Lanka and the Maldives**.

- The Conclave underlines regional cooperation and shared security objectives concerning **all littoral nations in the Indian Ocean Region (IOR)**.
 - It aims to make **maritime security, marine pollution response and maritime search & rescue priorities** for the region.

Statement 2 is not correct: The **Colombo Security Conclave** was later **expanded**, with **Mauritius joining as the fourth member** and **Bangladesh & Seychelles participating as observer countries**.

2. (b)

In News: The Number 4 Squadron (Oorials) of the Indian Air Force (IAF) based at Air Force Station Uttarlai (Barmer) is converting from the MiG-21 to the Su-30 MKI.

Statement 1 is not correct : An epoch-making decision was taken in August 1962 which was to profoundly alter the complexion and strength of the Indian Air Force into the decades ahead. The Government of India signed protocols with the Soviet Union for the very first supply of combat aircraft and missiles for the Indian Air Force. The purchase of 12 MiG-21 fighters from the **Soviet Union** and for Soviet technical assistance in setting up production facilities for the fighter in India was followed by the procurement of SA-2 (Dvina) surface-to-air missiles

Statement 2 is correct : The MiG-21 was the **first supersonic fighter in** service of the IAF and was inducted in 1963.

- It has **participated in all major conflicts** since then.
- More than 800 variants of the supersonic fighter have been inducted into service, and it remained the frontline fighter jet of the IAF for a long time.

3. (d)

In News: The **ninth edition** Exercise MITRA SHAKTI-2023 has commenced.

About

- It is an **annual joint military exercise** between **Srilanka and India**.
- The first edition of the Exercise was conducted in **2012**.
- India and Sri Lanka also conduct **Trilateral Maritime Exercise “Dosti”**, and a **Naval exercise named SLINEX**.

INTERNATIONAL RELATIONS

1. With reference to the Financial Action Task Force (FATF), which of the following statements is/are correct?
1. It is an intergovernmental organization established by the G20 to examine and develop measures to combat money laundering.
 2. India became full-fledged member in 2010
 3. As of October 2023, only North Korea and Iran are in the Blacklist.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

2. With reference to the United Nations Educational, Scientific and Cultural Organization (UNESCO), consider the following statements:
1. It was formed in 1945 and is a specialised agency of the United Nations (UN) based in Paris.
 2. India is a founding member of the Organisation.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

3. The World Local Production Forum (WPLF) is being held in The Hague, Netherlands.

In the context of the above statement, Which of the following international organisations are related to the World Local Production Forum (WPLF)?

- (a) United Nations Educational, Scientific and Cultural Organization.
- (b) World Health Organization
- (c) International Monetary Fund
- (d) Organisation for Economic Co-operation and Development

4. With reference to Quadrilateral Security Dialogue (QUAD), consider the following statements:
1. It is an informal strategic forum comprising four nations.
 2. The group met for the first time in 2007 on the sidelines of the Association of Southeast Asian Nations (Asean).

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

5. India's relationship with Bhutan is marked by which of the following?

- 1. Punatsangchhu Hydroelectric Power Project.
- 2. Plan for the cross-border rail link between Gelephu and Kokrajhar.
- 3. Operation Maitri – India's largest disaster relief operation abroad.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 1, 2 and 3

6. Indo-Pacific Maritime Domain Awareness (IPMDA) initiative is a technology and training initiative launched by which of the following?

- (a) Quad
- (b) BRICS
- (d) SCO
- (d) AUKUS Alliance

7. Which of the following countries are the founding members of the Organization of the Petroleum Exporting Countries (OPEC)?

- 1. Saudi Arabia
- 2. Libya
- 3. Venezuela
- 4. Kuwait
- 5. Algeria

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 5 only
- (b) 1, 3 and 4 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

8. Which of the following statements is **not correct** regarding the Mutual Legal Assistance Treaty (MLAT)?

- (a) It is an agreement for gathering and exchanging information in an effort to enforce public or criminal laws.
- (b) India has signed an MLAT agreement with around 45 countries.
- (c) The MLAT agreement is signed under the aegis of the International Criminal Court (ICC).
- (d) None of the above

9. India is **not** a member of which of the following regional groupings?

1. Asia-Pacific Economic Cooperation (APEC)
2. Regional Comprehensive Economic Partnership (RCEP)
3. Mekong–Ganga Cooperation (MGC)

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) All of the above

10. The Initiative for Critical and Emerging Technology (iCET) was launched by which of the following countries?

- (a) India and the United States
- (b) China and Russia
- (c) Japan and South Korea
- (d) France and Germany

11. With reference to the Financial Action Task Force (FATF), Which of the following statements is/are correct?

1. It was established in 1989 by the G7 to examine the measures to combat money laundering and terror financing.
2. All the members of the United Nations are members of the FATF.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

12. Which of the following statements regarding the India-Myanmar-Thailand (IMT) Trilateral Highway project is **not correct**?

- (a) The proposed IMT highway aims to connect India's Northeast region with Thailand
- (b) It encompasses cities like Bangkok, Yangon & Mandalay
- (c) The longest stretch of the highway will be in Thailand.
- (d) None of the above

13. With reference to Association of Southeast Asian Nations (ASEAN), consider the following statements:

1. It was established in 1967 after signing the Bangkok Declaration.
2. ASEAN Plus Three includes ASEAN members, China, Russia and Australia.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

14. Consider the following statements regarding the resolution on the UN tax convention:

1. It was tabled by the Organisation for Economic Cooperation and Development (OECD) members at the United Nations General Assembly (UNGA).
2. India along with the Africa Group has voted against the resolution, citing its impact on low-income countries.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

EXPLANATIONS

1. (b)

Statement 1 is not correct: The Financial Action Task Force (FATF) is an intergovernmental organization which leads global action to tackle money laundering, terrorist and proliferation financing.

- **History:** FATF was established in **1989** by the **G7** to examine and develop measures to combat money laundering. It originally included the G7 countries, the European Commission and eight other countries. **In 2001**, the FATF expanded its mandate to also combat terrorist financing.
- **Members:** FATF has **40** members including **India**. Recently **Indonesia** has become a member of FATF.
 - India joined with 'observer' status in 2006 and became a full member of FATF in 2010. **Hence, Statement 2 is correct.**
- **Statement 3 is not correct:** FATF has a Grey list and Blacklist. As of October **2023** **North Korea, Iran and Myanmar** are in the Blacklist.

2. (c)

Both the statements are correct: The United Nations Educational, Scientific and Cultural Organization (UNESCO) was established in 1945.

- Its headquarter is located in Paris, France.
- There were 51 Founding Members in 1945. India is a founding member of the Organisation.

3. (b)

World Local Production Forum is a regular global platform that encourages discussions and partnerships aimed at strengthening sustainable, quality, eco-friendly local production and technology transfer.

- It is a platform created at the **initiative of the World Health Organization (WHO)** with the aim of increasing access to medicines and other health technologies.
- It provides Member States and the global community with a regular platform to shape strategies, galvanize collective action, and foster partnerships on sustainable local production to improve timely and equitable access to quality assured health products.

4. (c)

Both the statements are correct: QUAD is known as the 'Quadrilateral Security Dialogue' (QSD) and is an **informal strategic forum** comprising four nations, namely -- **United States of America (USA), India, Australia and Japan.**

- **Objective:** One of the primary objectives of the Quad is to work for a free, open, prosperous and inclusive Indo-Pacific region.
- **Establishment:** The group met for the first time in 2007 on the sidelines of the **Association of Southeast Asian Nations (Asean).**
 - Its origins can be traced back to the **evolution of Exercise Malabar and the 2004 Tsunami** when India conducted relief and rescue operations for itself and neighbouring countries and was later joined by the US, Japan and Australia.

5. (b)

India-Bhutan Bilateral relationship

- **Option 1 is correct: India has constructed three Hydroelectric Projects (HEPs) in Bhutan:**
 - Chukha HEP,
 - Kurichhu HEP
 - Tala HEP which is operational and exporting surplus power to India.
 - ♦ Recently, India completed a 720 MW **Mangdechhu Hydroelectric Power Project** and both sides are in process of expediting the completion of other ongoing projects including the 1200 MW **Punatsangchhu-1** & 1020 MW **Punatsangchhu-2.**
- **Option 2 is correct: Connectivity Projects:**
 - A decision was recently made to go ahead with the final survey for the 58 km cross-border rail link between **Gelephu and Kokrajhar** in Assam to be built by India.
 - The two sides agreed to explore a **second rail link** for **about 18 km** between **Samtse in Bhutan** and **Banarhat in the West Bengal tea gardens** area.
- **Option 3 is incorrect: Operation Maitri & post-earthquake reconstruction assistance:**
 - In the wake of the 2015 earthquake in **Nepal**, GoI was the first responder and carried out its largest disaster relief operation abroad (Operation Maitri).
 - India extended US\$ 1 billion to Nepal as part of its long-term assistance for post-earthquake reconstruction in housing, education, health and culture heritage sectors.

6. (a)

Option a is correct: The Indo-Pacific Maritime Domain Awareness (IPMDA) initiative announced by the Quad grouping comprising (India, Australia, Japan and U.S.) at the Tokyo summit in early 2022, is committed to a free, open, inclusive and rules-based Indo-Pacific. This initiative [IPMDA] seeks to establish a comprehensive system for monitoring and securing maritime activities in the Indo-Pacific, ensuring the safety of critical sea lines of communication, and promoting cooperation among like-minded nations in the region.

7. (b)

In News : The 6th High-Level Meeting of the India-OPEC Energy Dialogue took place at the OPEC Secretariat in Vienna, Austria

- The Organization of the Petroleum Exporting Countries (OPEC) is a permanent, intergovernmental Organization, created at the **Baghdad Conference** on September 10–14, 1960, by **Iran, Iraq, Kuwait, Saudi Arabia and Venezuela**.
- **OPEC had its headquarters in Geneva**, Switzerland, in the first five years of its existence.
 - This was moved to Vienna, Austria, on September 1, 1965.
- OPEC's objective is to co-ordinate and unify petroleum policies among Member Countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry.

8. (c)

Mutual Legal Assistance Treaty (MLAT)

- **About:** Mutual Legal Assistance Treaty (MLAT) is an agreement between two or more countries for the purpose of gathering and exchanging information in an effort to enforce public or criminal laws.
 - As on date, the India has entered into bilateral Mutual Legal Assistance Treaties (MLATs)/ Agreements in criminal matters with around 45 countries.
- **Significance:** MLATs are used to send a formal request for investigation in foreign countries for
 - collection of evidence,
 - examination of witnesses and
 - execution of orders of attachment and confiscation of assets.
 - Through MLAT countries cooperate with one another in order to **provide and obtain formal assistance** in the **prevention, suppression, investigation and prosecution** of crime to ensure that the **criminals do not escape or sabotage** the due process of law for want of evidence available in different countries.

9. (a)

Asia-Pacific Economic Cooperation (APEC)

- **About:** Formed in 1989, the Asia-Pacific Economic Cooperation grouping has 21 members.
- **Focus:** The grouping's focus is on economies, rather than countries, which is why Hong Kong and Taiwan, which China claims as its own, participate separately.
- **Members:** The current members of the grouping are Australia, Brunei, Hong Kong (which the APEC website refers to as Hong Kong, China), New Zealand, Papua New Guinea, the Philippines, Indonesia, China, Japan, South Korea, Russia, Canada, the United States, Mexico, Peru, Chile, Malaysia, Vietnam, Singapore, Thailand and Chinese Taipei (Taiwan).
- **India's position:** India is **not a member** of APEC.

Mekong-Ganga Cooperation (MGC)

- The Mekong-Ganga Cooperation (MGC) is an initiative by six countries – **India** and five ASEAN countries, namely, Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.
- It was launched in **2000 at Vientiane, Lao PDR**. Both the Ganga and the Mekong are civilizational rivers, and the MGC initiative aims to facilitate closer contacts among the people inhabiting these two major river basins.
- It aims for cooperation in tourism, culture, education, as well as transport and communications.
- **India's position:** India is **a member** of MGC.

Regional Comprehensive Economic Partnership (RCEP)

- The Regional Comprehensive Economic Partnership is a free trade agreement among the Asia-Pacific nations of Australia, Brunei, Cambodia, China, Indonesia, Japan, South Korea, Laos, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, Thailand, and Vietnam.
- **India's position:** India is **not a member** of RCEP.

10. (a)

Initiative for Critical and Emerging Technology (iCET)

- The iCET was launched by **India and the United States** in May 2022.
- **Aim:** To position the two countries as trusted technology partners by building technology value chains and supporting the co-development and co-production of items.
 - It also aims to address regulatory restrictions, export controls and mobility barriers through a standing mechanism
- **Areas of cooperation:** It aims to **strengthen bilateral cooperation in critical and emerging technologies** such as Quantum computing, Semiconductors, 5G and 6G wireless infrastructure, and Civilian space projects such as lunar exploration.

11. (a)

Statement 1 is correct and 2 is not correct.

Financial Action Task Force (FATF)

- **The Financial Action Task Force (FATF)** is an intergovernmental organization which leads global action to tackle money laundering, terrorist and proliferation financing.
- **History:** FATF was established in **1989** by the G7 to examine and develop measures to combat money laundering. It originally included the G7 countries, the European Commission and eight other countries. In 2001, the FATF expanded its mandate to also combat terrorist financing.
- **Members:** FATF has **40** members including **India**. **Indonesia** has become a recent member of FATF.
- **Mandate:** FATF has the authority to issue warnings and sanctions against countries that fail to comply with its standards, such as suspension of membership and blacklisting.

12. (c)

India-Myanmar-Thailand (IMT) Trilateral Highway project

- **Aim:**
 - It aims to connect India's Northeast region with Thailand via Myanmar, facilitating trade and commerce, health, education, and tourism between the three nations while providing a more efficient and cost-effective transportation route. **Hence option (a) is correct.**
- **Cities in the IMT Highway:**
 - The IMT-TH project follows a proposed plan that starts from Bangkok and passes through cities like Sukhothai and Mae Sot in Thailand, and Yangon, Mandalay, Kalewa, and Tamu in Myanmar before reaching India. **Hence option (b) is correct.**
- **In India:**
 - In India, it is likely to pass through Moreh, Kohima, Guwahati, Srirampur, Siliguri, and Kolkata, spanning over 2,800 km.
 - The longest stretch of the highway will be in India, while the most minor road section will be in Thailand. **Hence option (c) is incorrect.**

- **Proposed extension:**

- India has proposed extending the road network to include Cambodia, Laos, and Vietnam, further expanding its reach and potential impact.
- Bangladesh is also interested in joining the initiative for enhancing trade links and tourism.

13. (a)

Statement 1 is correct: ASEAN is a **regional intergovernmental organization** comprising **ten countries** in Southeast Asia **established in 1967**, with the signing of the ASEAN Declaration (also known as the Bangkok Declaration).

Statement 2 is not correct: ASEAN Plus Three includes **ASEAN members, China, Japan, and South Korea**.

- **The East Asia Summit** involves ASEAN Plus Three countries, along with **Australia, India, New Zealand, Russia, and the United States**.

14. (d)

Resolution on UN tax convention

- **About:**

- The resolution was **tabled by the Africa Group** at the United Nations General Assembly (UNGA).
- India has voted in favour of the resolution.

- **Role of intergovernmental committee:**

- The resolution provides for an **intergovernmental committee** to develop protocols and measures to combat **tax-related illicit financial flows**.
 - ♦ It stipulates that the committee shall be made up of **not more than 20 members** elected on the basis of balanced geographical representation to ensure that the UN's five regional groups are equally represented.
- The resolution reminds the committee to take into account the needs of developing countries.

- **Significance:**

- Illicit financial flows enable cross-border tax evasion that exacerbates inequalities between high-income and low-income countries.
- The proposed convention seeks to **shift the focus of global tax policy decisions** from the Organisation for Economic Cooperation and Development (OECD) to a more **inclusive and equitable platform**.
 - ♦ The OECD, consisting of 39 high-income countries, has long held sway over international tax rules, raising concerns about the fairness of these regulations, particularly in favour of developed and wealthy nations.

SCIENCE & TECHNOLOGY

1. With reference to the Deep Ocean Mission (DOM), which of the following statements is/are correct?
1. The mission is implemented by the Ministry Of Earth Sciences (MoES).
 2. It aims to develop technologies for deep-sea mining and a manned submersible to carry three people to a depth of 10,000 meters in the ocean.

Select the correct answer using the code given below:

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
2. “Bletchley Declaration”, recently seen in the news, is related to which of the following?
- (a) Artificial intelligence (AI)
 - (b) Terrorism
 - (c) Climate Change
 - (d) Migration
3. With reference to the Synthesis gas, consider the following statements:
1. It is a mixture of hydrogen and carbon monoxide, in various ratios.
 2. The gas is used for producing ammonia and methanol.
 3. The gas is combustible and can be used as a fuel.

How many statements given above are correct?

- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
4. With reference to ‘ATL Marathon 2023-24’-, consider the following statements :
1. It is an innovation challenge which is being organised by NITI Aayog in collaboration with the World Bank.
 2. It is open only for those schools that are connected to an Atal Tinkering Lab.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

5. Consider the following statements regarding the Zika virus:
1. It is transmitted primarily by Aedes mosquitoes in tropical and subtropical regions.
 2. It can not be transmitted from mother to foetus during pregnancy and through sexual contact.
 3. It was first identified in Nigeria in a Rhesus macaque monkey
- How many of the above statements are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
6. With reference to the Monkeypox (Mpox), consider the following statements:
1. It is an infectious disease caused by a species of the genus Orthopoxvirus.
 2. It was first identified in humans in Denmark.
 3. Mpox can not be transmitted to humans through physical contact.
 4. The global outbreak of mpox was declared a public health emergency of international concern (PHEIC) in 2022.
- How many of the above statements are correct?
- (a) Only one
 - (b) Only two
 - (c) Only three
 - (d) All four
7. With reference to the Wolbachia, consider the following statements:
1. It is a naturally occurring genus of fungi.
 2. The Wolbachia method makes it harder for viruses to reproduce inside the mosquitoes.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
8. Consider the following statements:
1. Helicobacter pylori is an infectious viral disease of cattle.
 2. Helicobacter pylori is vector-borne which cannot spread to humans.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
9. Consider the following statements regarding a space observatory:
1. Launched in 2021 to a point 1 million miles (1.6 million kilometers) away.
 2. It is the biggest and most powerful astronomical observatory ever sent into space which sees the universe in the infrared.

3. It was developed by NASA with the assistance of the European Space Agency and the Canadian Space Agency.

The statements given above are related to which of the following?

- (a) Chandra observatory
- (b) The Webb Telescope
- (c) The Spitzer Space Telescope
- (d) Compton Gamma Ray Observatory

10. Euclid mission was seen in the news, it is related to which of the following?

- (a) To conduct more detailed research on the "God particle"
- (b) To study the complex organic molecules on the Mars
- (c) To investigate the mystery of dark matter
- (d) To observe tropical cyclones in a unique, inclined low Earth orbit

11. Consider the following statements:

- 1. Roughly 68% of the universe is dark energy.
- 2. Dark matter is a repulsive force.
- 3. Dark energy is a kind of cosmic force that holds the universe together.

How many of the above statements are correct?

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

12. Bacterium '*Orientia tsutsugamushi*' is related to which of the following:

- (a) Boutonneuse fever
- (b) Scrub typhus
- (c) Pneumococcal disease
- (d) Legionnaires disease

13. Which of the following best describes 'Quasars'?

- (a) It is a natural light display in Earth's sky, predominantly seen in high-latitude regions.
- (b) It is a powerful and luminous explosion of a star which happens at the end of a star's life cycle.
- (c) It is an astronomical object with a gravitational pull so strong that nothing, not even light, can escape it.
- (d) It is an extremely luminous active galactic nucleus (AGN) located in supermassive black holes.

14. With reference to NISAR Satellite, consider the following statements :

- 1. It is a Low Earth Orbit observatory being jointly developed by Japan Aerospace Exploration Agency and ISRO.
- 2. It is the first satellite mission to collect radar data in two microwave bandwidth regions.
- 3. It will map the entire globe in 12 days and provide spatially and temporally consistent data for understanding changes in Earth's ecosystems

How many of the statements given above are correct?

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

15. Euclid Mission recently seen in the news, is launched by which of the following Space Agencies?

- (a) Indian Space Research Organisation (ISRO)
- (b) SpaceX
- (c) European Space Agency (ESA)
- (d) Roscosmos

16. With reference to the Measles, consider the following statements:

1. It is a contagious disease caused by Bacteria.
2. It infects the respiratory tract and then spreads throughout the body.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

17. “Freemartins” recently seen in the news, is related to which of the following?

- (a) They are the agents of the Government of India designated to propagate the schemes of the central government.
- (b) These are the cattles that are born exhibiting characteristics of both sexes.
- (c) They are specially designed security troops by India to counter terrorism.
- (d) They are the volunteer groups working for the rescue missions in various disasters.

18. Glyphosate considered harmful when exposed to high levels for a long time, is most likely present in which of the following?

- (a) Food preservatives
- (b) Fruit ripening substances
- (c) Herbicides
- (d) Toiletries

19. With reference to the Atmospheric Waves Experiment (AWE) which of the following statements is/are correct?

1. It was launched by National Aeronautics and Space Administration (NASA) and Indian Space Research Organisation (ISRO).
2. AWE will measure the air glow at mesopause to understand the space weather.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

20. With reference to the 3D printing, consider the following statements:

1. It was invented in the 1980s by Charles W. Hull.
2. 3D printers construct the desired object by using subtractive manufacturing processes.
3. Accuracy issues are one of the disadvantages of 3D Printers.

How many of the statements given above are correct?

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

21. Therapy is called Casgevy, which was recently in the news, and is related to which of the following?

1. The therapy uses the patient's own blood stem cells, which are precisely edited by gene editing technology.
2. It has been approved in India to cure leukaemia, lymphoma, and myeloma.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

22. With reference to the Optical Fibers, which of the following statements is/are correct?

1. Optical fibers work on the principle of Total Internal Reflection.
2. They are not suitable for the transmission of data for long distances.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

EXPLANATIONS

1. (a)

Statement 1 is correct and 2 is not correct.

Deep Ocean Mission (DOM)

- DOM is implemented by the **Ministry Of Earth Sciences (MoES)** and was approved in 2021 at a cost of nearly **Rs 4,077 crore** over a five-year period in a phased manner.
- The mission aims to develop technologies for deep-sea mining and a manned submersible to carry three people to a depth of **6,000 meters** in the ocean.

2. (a)

The United Kingdom (U.K.) hosted the **first Artificial Intelligence (AI) Safety Summit**.

- Over 27 countries including **India and China** along with the **US, UK and EU**, signed the Bletchley Declaration, vowing to **develop AI in a human-centric manner**.

- The Bletchley Declaration represents a **“world-first” accord**, designed to tackle the myriad of **safety concerns** associated with **advanced AI models**, particularly those developed by major entities like **OpenAI, Google and Microsoft**.

3. (c)

All the statements are correct.

- Syngas or synthetic gas, is a mixture of primarily **hydrogen and carbon monoxide** that often also contains some amount of **carbon dioxide and methane** and that is highly combustible.
- Syngas is used primarily in the production of hydrocarbon fuels, such as diesel fuel and **methanol**, and in the production of industrial chemicals, particularly **ammonia**.

4. (d)

In News: Atal Innovation Mission (AIM), NITI Aayog opened applications for ‘ATL Marathon 2023-24’

Statements 1 and 2 are not correct : ‘ATL Marathon 2023-24’ is a flagship innovation challenge organised this year in collaboration with the **Ministry of Education, YuWaah and UNICEF**.

ATL Marathon is a national-level innovation challenge for young innovators across India who can solve community problems of their choice, and develop innovative solutions in the form of working prototypes.

- Amazon Web Services (AWS) is the hosting partner of this edition of ATL Marathon.
- **ATL Marathon is open for all schools across the country**, independent of **whether they are connected to an Atal Tinkering Lab or not**.

5. (a)

In News: Five Karnataka villages come under surveillance after Zika virus outbreak.

Statement 1 is correct : **Zika virus** is primarily **transmitted by infected mosquitoes of the Aedes (Stegomyia) genus**, mainly *Aedes aegypti*, in **tropical and subtropical regions**.

- *Aedes* mosquitoes usually bite during the day. These mosquitoes also transmit dengue, chikungunya and urban yellow fever.

Statements 2 and 3 are not correct : It is also **transmitted from mother to fetus during pregnancy, as well as through sexual contact**, transfusion of blood and blood products, and possibly through organ transplantation.

- It was **first identified in Uganda in 1947** in a Rhesus macaque monkey followed by evidence of infection and disease in humans in other African countries in the 1950s.
- From the 1960s to 1980s, sporadic human infections were detected across Africa and Asia.

6. (b)

In News : A new analysis shows that the monkeypox, or mpox, virus is rapidly diverging into several lineages characterized by mutations resulting from continued interaction with the human immune system, suggesting that the virus has been circulating in humans since 2016.

Statements 1 and 4 are correct: Mpox (monkeypox) is a viral illness caused by the monkeypox virus, a species of the **genus Orthopoxvirus**.

- It can cause a painful rash, enlarged lymph nodes and fever.
- The disease mpox (formerly monkeypox) is caused by the monkeypox virus (commonly abbreviated as MPXV), an enveloped double-stranded DNA virus of the Orthopoxvirus genus in the Poxviridae family, which includes variola, cowpox, vaccinia and other viruses.

- The **global outbreak of mpox was declared a public health emergency of international concern (PHEIC) on 23 of July 2022**. WHO published a strategic preparedness and response plan for mpox and a suite of technical guidance documents

Statement 2 and 3 are not correct : The monkeypox virus was discovered in Denmark (1958) in monkeys kept for research and the **first reported human case of mpox was a nine-month-old boy in the Democratic Republic of the Congo (DRC, 1970)**.

- **Mpox can spread** from person to person or occasionally from animals to people.
- **Person-to-person transmission of mpox can occur** through direct contact with infectious skin or other lesions such as in the mouth or on genitals

7. (b)

Statement 1 is not correct: Wolbachia is a **genus of bacteria** and only lives inside host cells, but not in the environment.

- Wolbachia was first discovered in the reproductive tissues of **mosquitoes Culex pipiens** by **Hertig and Wolbach in 1924** and the species was later named **Wolbachia pipientis**.
- Many mosquitoes, including some of the major disease-transmitting species, carry Wolbachia naturally.

Statement 2 is correct: How does the Wolbachia Method work?

- When mosquitoes carry Wolbachia, the **bacteria compete with viruses** like dengue, Zika, chikungunya and yellow fever.
- This makes it **harder for viruses to reproduce** inside the mosquitoes. And the mosquitoes are much less likely to spread viruses from person to person.

8. (d)

In News: National Institute of Cholera and Enteric Diseases (ICMR-NICED), Kolkata makes quick detection of drug-resistant H. pylori possible.

Statements 1 and 2 are not correct : **Helicobacter pylori (H. pylori)** is a gram-negative **spiral-shaped bacterium** that **can infect humans**.

- **It is often found in the stomach of affected individuals and causes inflammation and ulceration.**
- It is the most important cause for chronic or atrophic gastritis, peptic ulcer, gastric lymphoma, and gastric carcinoma;
- It is usually acquired in early childhood and persists in the absence of treatment.
- **Transmission** of H. pylori can occur via the faecal-oral, gastric-oral, oral-oral, or sexual routes.

9. (b)

The Webb Telescope

- **About:**
 - Launched in 2021 to a point **1 million miles (1.6 million kilometers) away**, Webb is the **biggest and most powerful astronomical observatory** ever sent into space; it sees the universe in the **infrared**.
 - It is the **world's premier space** science observatory.
 - It will solve mysteries in our solar system, **look beyond distant worlds** around other stars, and probe the mysterious structures and origins of our universe and our place in it.

- NASA's \$10 billion James Webb Telescope was developed with the **assistance of the European Space Agency** and the **Canadian Space Agency**.
- The telescope launched on an **Ariane 5** from Europe's Spaceport in **French Guiana**.
- **Mission:**
 - It will be "a giant leap forward in the quest to understand the Universe and our origins", as it will examine every phase of cosmic history: from the Big Bang to the formation of galaxies, stars, and planets to the evolution of our own Solar System.

10. (c)

The European Space Agency's (ESA) Euclid mission that was launched in July this year to investigate the mystery of dark matter and dark energy, released its first five science images.

Euclid, ESA's dark universe detective, was designed to investigate how dark matter and dark energy made the cosmos what it is. About 95 per cent of the universe seems to be made of these units. Over the next six years, Euclid will observe the shapes, distance and motions of billions of galaxies out to 10 billion light-years. In the process, it will create what ESA says is the largest cosmic 3D map ever made.

11. (a)

Statement 1 is correct: Roughly **68% of the universe is dark energy**. **Dark matter** makes up about **27%**. The rest - everything on Earth ever observed adds up to **less than 5% of the universe**.

Statement 2 and 3 are not correct: Dark Matter: Unlike normal matter, dark matter **does not interact with the electromagnetic force**. This means it does not absorb, reflect or emit light, making it extremely hard to spot.

- Dark matter works like an **attractive force** — a kind of cosmic cement that **holds the universe together**. This is because dark matter **does interact with gravity**.
- **Dark Energy:** Dark energy is a **repulsive force** — a sort of anti-gravity — that **drives the universe's ever-accelerating expansion**. Dark energy is the far more dominant force than Dark matter.

12. (b)**Scrub Typhus**

- It is caused by a zoonotic rickettsial bacterium called *Orientia tsutsugamushi*, which is transmitted to humans through the bites of infected chiggers (larval mites).
- Mites carrying the disease are generally found in the bush, jungle and paddy areas, so the disease is also called jungle or bush typhus.
- The symptoms of scrub typhus commonly include *fever, headache, body ache* and sometimes a rash.

13. (d)

What are Quasars?

- A quasar (also known as a QSO or quasi-stellar object) is an extremely luminous active galactic nucleus (AGN).
- Quasars were first discovered six decades ago. They are located in supermassive black holes, which sit in the centre of galaxies.
- As a supermassive black hole feeds on gas and dust, it releases extraordinary amounts of energy in the form of radiation, resulting in a quasar.

- Black hole is a point in space where matter is so compressed as to create a gravity field from which even light cannot escape.

Significance of Quasars

- Quasars play a key role in our understanding of the history of the universe, and possibly also the future of the Milky Way.
- Quasars act as “cosmic lighthouses”, allowing researchers to see the outer reaches of the universe.
- NASA’s James Webb Space Telescope will study the earliest galaxies in the universe. The telescope is capable of detecting light from even the most distant quasars, emitted nearly 13 billion years ago.

14. (b)

In News: Scientists and engineers involved in the **NASA-ISRO Synthetic Aperture Radar (NISAR)** mission have completed key tests including the thermal vacuum testing ahead of its launch which is scheduled to take place in the first quarter of 2024.

Statement 1 is not correct : NISAR is a **Low Earth Orbit (LEO)** observatory being jointly developed by **NASA** and **ISRO** with the goal to make global measurements of the causes and consequences of land surface changes using advanced radar imaging.

Statements 2 and 3 are correct : NISAR will measure **Earth’s changing ecosystems**, dynamic surfaces, and ice masses providing information about biomass, natural hazards, sea level rise, and groundwater, and will support a host of other applications.

- It will observe **Earth’s land and ice-covered surfaces** globally with 12-day regularity on ascending and descending passes, sampling Earth on average every 6 days for a baseline 3-year mission.
 - It carries **L and S dual band Synthetic Aperture Radar (SAR)**, which operates with Sweep SAR technique to achieve large swaths with high resolution data.
 - ♦ NISAR is the first satellite mission to collect radar data in two microwave bandwidth regions, called the L-band and the S-band
 - ♦ The SAR payloads mounted on Integrated Radar Instrument Structure (IRIS) and the spacecraft bus are together called an observatory.
- **Planned Launch Date: 2024 and** is expected to be launched from the Satish Dhawan Space Centre in Sriharikota onboard ISRO’s GSLV Mark-II launch vehicle.

15. (c)

The **European Space Agency’s (ESA) Euclid mission** is launched to investigate the **mystery of dark matter and dark energy**.

- It has been launched in collaboration with The **National Aeronautics and Space Administration (NASA)**.

16. (b)

Statement 1 is not correct: Measles is a highly contagious disease **caused by a virus**. It spreads easily when an infected person breathes, coughs or sneezes.

- It can cause severe disease, complications, and even death.

Statement 2 is correct: It can affect anyone but is most common in children.

- It infects the **respiratory tract and then spreads throughout the body**.

17. (b)

About Freemartins

- In animal husbandry, **cattle that are born exhibiting characteristics of both sexes are called freemartins.**
- **Freemartins are sterile female cattle** that result from the twinning of a male and a female within the same uterus.
- This phenomenon **occurs in approximately 90% of such twin pregnancies in cattle.**

18. (c)

Glyphosate

- Glyphosate is a widely used **herbicide** that controls broadleaf weeds and grasses.
- Its usage became popular in the country after the illegal cultivation of herbicide tolerant (Ht) BT cotton started.

Risk Factors of using Glyphosate

- It is possible that glyphosate residues can occur in food products. It also has a potential link to cancer in humans.
- It is also a cause of the death of important insects, such as bees. Biologists have sounded the alarm over the serious decline in insect populations that affect species diversity.

19. (b)

Statement 1 is not correct and 2 is correct.

What is the Atmospheric Waves Experiment (AWE)?

- National Aeronautics and Space Administration (NASA) is set to launch the Atmospheric Waves Experiment to study interactions between terrestrial and space weather.
- AWE is planned under NASA's Heliophysics Explorers Program to study the links between how waves in the lower layers of the atmosphere impact the upper atmosphere, and thus, Space weather.
- It will be launched and mounted on the exterior of the Earth-orbiting International Space Station (ISS). From the vantage point, it will look down at the Earth and record the colorful light bands, commonly known as airglow.
- AWE will measure the air glow at mesopause (about 85 to 87 km above the Earth's surface), where the atmospheric temperatures dip to minus 100 degrees Celsius.

Functioning of AWE

- AWE will perform focused mapping of the colorful air glows in the Earth's atmosphere.
- An Advanced Mesospheric Temperature Mapper (ATMT) onboard the AWE, will scan or map the mesopause.
- Using the four identical telescopes comprising an imaging radiometer, the brightness of light at specific wavelengths will be obtained.
- The information can then be converted into a temperature map, which could reveal the airglow movement and ultimately, give clues on their role in the upper atmosphere and Space weather.

20. (b)

Statement 1 is correct: 3D Printing is a process that uses computer-created design to make three-dimensional objects layer by layer. It was invented in the **1980s by Charles W. Hull.**

It is an **additive process**, in which layers of a material like plastic, composites or bio-materials are built up to construct objects that range in shape, size, rigidity and color. **Hence, Statement 2 is not correct.**

Statement 3 is correct: Disadvantages of 3D Printing

- **3D Printers May Not Provide Enough Strength:** Building an object layer by layer, can affect the durability and strength of the object.
- **3D Printers May Have Accuracy Issues:** Although CAD is often an accessible and accurate way to design, there can be errors. Accuracy with 3D printing is dependent on the techniques and printers use.

21. (a)

Casgevy:

- **About:**
 - The first therapy based on **gene editing technology Crispr-Cas9** for **sickle cell disease** and **thalassaemia** has been approved in the UK.
 - The “**genetic scissors**” that became available for the first time in 2012 have revolutionised the field of biotechnology.
- **The therapy is called as Casgevy:**
 - The therapy **edits the faulty gene** that leads to these blood disorders, **potentially curing** the person for life.
 - ♦ So far, the only permanent treatment has been a bone marrow transplant, for which a closely matched donor is needed.
- **How does the therapy work?**
 - Both sickle cell disease and thalassaemia are caused by **errors in the gene for haemoglobin**.
 - ♦ Haemoglobin is a protein in the red blood cells that carry oxygen to organs and tissues.
 - The therapy uses the **patient’s own blood stem cells**, which are precisely edited using **Crispr-Cas9**.

22. (a)

Statement 1 is correct and 2 is not correct.

About Optical Fibres

- Optical fibres are made of **thin cylindrical strands of glass**. The diameter of a typical fibre is close to the diameter of a **human hair**.
- These fibres **can carry information, such as text, images, voices, videos, telephone calls**, and anything that can be encoded as digital information, across large distances **almost at the speed of light**.

Working of optical fibres

- When a beam of light falls on a glass surface, it passes through partially while the rest is reflected away. When it passes through, **its path bends because the refractive index of glass is different from that of air**.
 - The refractive index is the property of a medium that determines **how fast light can travel in it**.

- When a beam travels in the reverse direction, i.e. from glass to air, **it's possible that it won't enter the air**. Instead, it will be completely reflected back within the glass.
 - This phenomenon, known as **total internal reflection**, is the basis of guiding light across long distances without a significant loss of optical power.

Advantages of optical fibres

- **Immunity to Electromagnetic Interference (EMI):** Optical fibers are immune to EMI, **unlike copper cables** that are susceptible to interference from electrical sources.
- **High Bandwidth:** Optical fibers can transmit significantly more data than copper cables. This means they can handle the increasing demand for high-speed internet and data transmission.
- **Long-Distance Transmission:** Optical fibers can transmit data over longer distances without signal degradation. This is crucial for telecommunications networks that span vast areas.

ENVIRONMENT & ECOLOGY

1. Adaptation Gap Report is released by which of the following?

- (a) World Bank
- (b) Intergovernmental Panel on Climate Change (IPCC)
- (c) The United Nations Environment Programme (UNEP)
- (d) World Nature Organisation

2. With reference to the Blue Flag certification, consider the following statements:

- 1. It is a voluntary award for beaches, marinas, and sustainable tourism boats.
- 2. Only 12 beaches in India have received the certification so far.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

3. With reference to the Biosphere reserves, which of the following statements is/are correct?

- 1. In India there are 20 biosphere reserves recognised under UNESCOs Man and the Biosphere Programme.
- 2. The core zone of the reserve is used for activities that can reinforce scientific research, monitoring, training and education.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

4. Consider the following statements regarding the recently concluded 'Loss and damage fund pact':

- 1. The agreement was concluded at Dakar by Ministers from the world's 46 least-developed countries (LDC).
- 2. The USA formally withdrew support from the pact and insisted that it should be made clear that contributions to the fund were voluntary.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

5. Production Gap Report is released by which of the following?

1. World Bank
2. Stockholm Environment Institute (SEI)
3. UN Environment Programme (UNEP)
4. International Monetary Fund (IMF)

Choose the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1, 2 and 4 only
- (d) 1, 2, 3 and 4

6. The word Picocystis Salinarum is sometimes mentioned in news in reference to:

- (a) Species of snake
- (b) Green alga
- (c) Species of a Frog
- (d) Fossils of a kind of early species of Elephant

7. Consider the following pairs:

<i>Species in news</i>	<i>(IUCN) Red List Status</i>
1. Zaglossus attenboroughi	Critically Endangered
2. Jaguars	Endangered
3. Red Sanders	Near Threatened

How many of the above pairs are correctly matched?

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

8. With reference to the Long-tailed macaques which of the following statements is/are correct?

1. The species is found in the North Eastern states of India only.
2. The IUCN status of the species is Endangered.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

9. Which of the following reports is published by the United Nations Environment Program (UNEP)?

1. Global Environment Outlook
2. Living Planet Report
3. Global Climate Report
4. Actions on Air Quality

Choose the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 4 only
- (d) 1, 2, 3 and 4

10. Consider the following statements regarding the International Tropical Timber Council (ITTC):

- 1. ITTC is a group that meets at least once a year.
- 2. It aims to promote sustainable management and conservation of tropical forests.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

11. Consider the following statements regarding a fish species:

- 1. It is native to the waters of the southeastern United States.
- 2. It has been part of various malaria control strategies in India since 1928.
- 3. They are notorious for being invasive in nature.

The statements described above are related to which of the following fish species?

- (a) Gambusia fish
- (b) Swordfish
- (c) Bowfin
- (d) Bonefish

12. With reference to UN Framework Convention on Climate Change (UNFCCC), consider the following statements:

- 1. Conference of Parties (COP) is the supreme decision making body.
- 2. Industrialized nations agree under the Convention to financially support action on climate change in developing countries.
- 3. Kyoto protocol falls under the aegis of framework.

How many of the statements given above are correct?

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

13. With reference to the Ghol fish, which of the following statements is/are correct?

- 1. The fish is found in the Indo-Pacific region that stretches from the Persian Gulf to the Pacific Ocean.
- 2. The IUCN Status of the fish is Near Threatened.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

- 14.** With reference to Sturgeon which of the following statements is/are correct?
1. These fishes are found mostly in the freshwater bodies of North America.
 2. They are called 'living fossils' because their appearance has altered very little over the years.
- Select the correct answer using the code given below:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 15.** Which one of the following species is used in mosquito-control programmes?
- (a) Sea Robin (Gurnards)
 - (b) Ghol Fish
 - (c) Gambusia Fish
 - (d) Jellyfish
- 16.** With reference to the Biogas which of the following statements is/are correct?
1. It is an energy-rich gas produced by aerobic decomposition of biomass.
 2. It consists of methane, carbon dioxide, and smaller amounts of nitrogen gas.
- Select the correct answer using the code given below:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
- 17.** India is a part of which of the following organisation(s)?
1. The Arctic Council
 2. International Tropical Timber Council
 3. International Whaling Commission
- Select the correct answer using the code given below:
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
- 18.** With reference to the Indian Ocean Tuna Commission (IOTC), which of the following statements is/are correct?
1. Only the states adjacent to the Indian Ocean region are members of the IOTC.
 2. IOTC is headquartered in Victoria, Seychelles.
- Select the correct answer using the code given below:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

EXPLANATIONS

1. (c)

The UN Environment Programme (UNEP) releases the **annual Adaptation Gap Report**.

- The first edition was released in **2014**.
- The aim of the reports is to **inform national and international efforts to advance adaptation**.

2. (c)

Both statements 1 and 2 are correct: Blue Flag is one of the world's most recognised **voluntary awards** for beaches, marinas, and sustainable tourism boats.

- **Certification by:** Foundation for Environmental Education (FEE), non-profit organization based in Denmark.
- In order to qualify for the Blue Flag, a series of 33 stringent criteria divided into 4 major heads namely
 - Environmental education and information
 - Bathing water quality
 - Environmental management
 - Conservation and safety services in the beaches
- **12 Beaches in India** are certified with Blue Flag Certification.

3. (d)

Both the Statements are not correct.

Biosphere reserves

- Biosphere reserves are '**learning places for sustainable development**'.
- They are sites for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity.
- They are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located.
- According to UNESCO, there are currently **738 biosphere** reserves across **134** countries, including **22 transboundary sites**.
- **In India** there are **12 biosphere reserves** recognised under **UNESCOs Man and the Biosphere Programme**.

Zones of Biosphere reserves

- **Core Zone:** In the heart of each biosphere reserve lies the strictly protected core zone, providing habitat for flora and fauna, and protecting water, soil, air, and biota as a whole ecosystem.
- **Buffer zone:** They surround or adjoin the core area, and are used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education.
- **Transition zone:** The outermost edge is the transition zone where communities practice socio-culturally and ecologically sustainable human activities.

4. (b)

Loss and damage fund pact

- An international **panel on loss and damage** due to the climate crisis has recently agreed on operationalising a **global fund**.

- The agreement was concluded in **Abu Dhabi**. Hence **statement 1 is incorrect**.
- The text will be **forwarded for further discussion** at the 28th Conference of Parties (**COP28**) to the United Nations Framework Convention on Climate Change.
 - The **parties denote countries** that are **signatories to the convention**.
- **USA's Objection to the fund**:
 - The US wanted to withdraw support to the text because it insisted that it should be made clear that **contributions to the fund** were **voluntary**. Hence **statement 2 is correct**.

5. (b)

The **2023 Production Gap Report** titled "Phasing down or phasing up" is released.

- The first edition was released in **2019**.
- It is produced by the **Stockholm Environment Institute (SEI)**, Climate Analytics, E3G, International Institute for Sustainable Development (IISD) and the **UN Environment Programme (UNEP)**.
- It tracks the **discrepancy** between governments' **planned fossil fuel production** and **global production levels** consistent with limiting warming to 1.5°C or 2°C.

6. (b)

Picocystis salinarum

- Picocystis salinarum is a globally widespread **picoplanktonic green alga** of saline lakes.
- It is a unique organism which survives the hypersaline alkaline environments by enhancing photosynthesis and ATP synthesis along with chaperone proteins.
- **Significance**: P. salinarum can be used for biotechnological applications and as a model organism for deciphering the molecular mechanisms of osmotic adaptation.

7. (a)

Zaglossus attenboroughi is a kind of long-beaked **echidna** named for famed British naturalist **David Attenborough**. **IUCN Red List status** : Listed as **Critically Endangered** listed on Appendix II of CITES. (**Correctly Matched**)

Red Sanders is a **flora-species** that is endemic to the tropical dry deciduous forest in **Eastern Ghats** region of Andhra Pradesh. It is under '**endangered list**' in the International Union for Conservation of Nature (IUCN) Red List. (**Incorrectly Matched**)

Jaguars (Panthera onca) They are mighty cats most easily recognized by the bold rosettes generously spotted across their tawny-colored coats. It is the third biggest cat in the world - after the tiger and the lion - and is the largest cat in the Americas. Protection status : IUCN Red list status: listed as **Near Threatened** (**Incorrectly Matched**)

8. (b)

Statement 1 is not correct and 2 is correct.

Long-tailed macaques

- **Scientific Name**: Macaca Fascicularis
- **Habitat and Distribution**: It is widely distributed across South and SouthEast Asia. In India it is found on **Nicobar Islands** which include **Little Nicobar, Great Nicobar and Katchall Islands**.
- **IUCN status**: Endangered

9. (c)

About The United Nations Environment Program (UNEP)

- It is the **leading environmental authority** in the United Nations system established in **1972**.

- **The UN Environment Assembly** is the policy-making organ of UNEP.
- **Headquarter:** Nairobi, Kenya.
- **Major Reports:** **Global Environment Outlook**, The Rise of Environmental Crime Report, **Actions on Air Quality**, Frontiers Report, Adaptation Gap Report.
- **Living Planet report** is published every two years by the **World Wide Fund** for Nature and the **Global Climate Report** is released by the **World Meteorological Organisation (WMO)**.

10. (c)

International Tropical Timber Council

- **About:**
 - The IITC is the governing body of the International Tropical Timber Organisation (ITTO), which aims to promote sustainable management and conservation of tropical forests.
 - ♦ ITTO was established under the International Tropical Timber Agreement (ITTA), which was sponsored by the United Nations Conference on Trade and Development and was ratified in 1985.
 - ITTC is a group that meets at least once a year to discuss a wide-ranging agenda.
- **59th ITTC:**
 - It was **held in Thailand** to decide the **future of IITO**, whether it should continue and how to proceed.
 - It was **aimed** at promoting **sustainable tropical forest management** and the trade of sustainably produced tropical timber.

11. (a)

Gambusia fish

- **About:**
 - Gambusia is native to the waters of the southeastern United States.
 - ♦ It is a freshwater fish.
 - A single full grown fish eats about 100 to 300 mosquito larvae per day.
- **Characteristics:**
 - Gambusia stands out as some of the most widely dispersed freshwater fish, aided by their robust adaptability and high tolerance for fluctuating environmental conditions.
- **Significance:**
 - Gambusia have been a part of mosquito-control strategies for over a century in various parts of the world, including India.
 - It has been part of various malaria control strategies in India since 1928.
- **Challenge:**
 - They are notorious for their detrimental ecological impact, including displacing and preying on native fauna, leading to the extinction of native fish, amphibians, and various freshwater communities.
 - In India, some reports have indicated a decline in Microhyla tadpoles following the introduction of Gambusia.
 - For these reasons, the World Health Organisation stopped recommending Gambusia as a mosquito control agent in 1982.

12. (c)

All three statements are correct: UN Framework Convention on Climate Change (UNFCCC)

- It is an **international treaty** established to address the **global challenge** that came into force in **1994**.
- **Parties and Membership:** The Convention has **198 members**.
- **Conference of the Parties (COP):** It is the **supreme decision-making body** of the UNFCCC and COP meetings are **held annually**. Hence, **Statement 1 is correct**.
- **Funds to Developing Countries:** Industrialized nations agree under the Convention to support climate change activities in developing countries by **providing financial support** for action on climate change-- **above and beyond any financial assistance** they already provide to these countries. Hence, **Statement 2 is correct**.
- **Kyoto Protocol:** It was adopted in **1997** and establishes **legally binding emission reduction targets** for **developed countries**. Hence, **Statement 3 is correct**.
 - It operates under the framework of the UNFCCC and has its own decision-making body, the **Meeting of the Parties** to the Kyoto Protocol (CMP).

13. (c)

In News: The Ghol fish (Black Spotted Croaker) was declared the state fish of Gujarat during the Global Fisheries Conference India, 2023.

About

- **Scientific name:** Protonibea diacanthus
- **Distribution:** The fish is usually found in the Indo-Pacific region that stretches from the Persian Gulf to the Pacific Ocean.
- **IUCN Status:** Near Threatened

14. (c)

Both the statements are correct: In News - Illegal sale of sturgeon is rampant in the lower Danube region, according to a report released by the World Wildlife Fund (WWF).

- **Distribution:** Sturgeons are found **mostly** in the **freshwater bodies** of North America and along its eastern coast. They are also found in the rivers and inland seas of southern Russia and Ukraine.
- **Significance:** Sturgeons have existed since the time of dinosaurs, for about 200 million years.
 - They are called '**living fossils**' because their appearance has altered very little over the years.
 - Sturgeon eggs are often considered an extravagant delicacy and are popularly known as **caviar**.

15. (c)

About

Common name: Gambusia fish is also known as mosquitofish.

Scientific name: Gambusia affinis (G. affinis).

Distribution: It is native to the waters of the southeastern United States.

IUCN Status: Least Concern.

Use in mosquito-control programmes

- A single full grown Gambusia fish eats about 100 to 300 mosquito larvae per day. Hence it is widely used as a biological agent for controlling mosquito larvae in various parts of the world.

- It has been part of various malaria control strategies in India since 1928, including the Urban Malaria Scheme. The fish continue to be released into freshwater bodies across the country, like Andhra Pradesh, Chandigarh and Uttar Pradesh.

16. (b)

Statement 1 is not correct and 2 is correct.

What is Biogas?

- **Biogas** is an energy-rich gas produced by **anaerobic decomposition** of biomass.
- **Raw material:** It is produced from sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, and sewage treatment plant waste, among others.
- **Composition:** Raw biogas typically consists of methane (50–75%), carbon dioxide (25–50%), and smaller amounts of nitrogen (2–8%). Trace levels of hydrogen sulfide, ammonia, hydrogen, and various volatile organic compounds are also present in biogas depending on the feedstock.
- **Use:** It can be burned directly as a fuel, or purified and upgraded by removing carbon dioxide, hydrogen sulfide, and then compressed to make CBG.

17. (b)

- **Option 1 is incorrect:**
 - The Arctic Council was established on 19 September 1996 when the governments of Canada, the Kingdom of Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the United States signed the Ottawa Declaration.
 - India has an observer status at the council.
- **Option 2 is correct:**
 - The IITC is the governing body of the International Tropical Timber Organisation (ITTO), which aims to promote sustainable management and conservation of tropical forests.
 - It has 75 countries, including India.
 - Its members manage about 80% of the world's tropical forests and are responsible for 90% of the global tropical timber trade.
- **Option 3 is correct:**
 - The IWC was established in 1946 as the global body responsible for management of whaling and conservation of whales. Today the IWC has 88 member countries.
 - India has been a member of the International Whaling Commission since 1981 and has maintained a consistent stand on whale conservation.

18. (b)

Statement 1 is not correct and 2 is correct.

- **IOTC is an intergovernmental organization** responsible for the management of tuna and tuna-like species in the **Indian Ocean**.
- **Objectives:** It promotes cooperation among its Contracting Parties (Members) and Cooperating Non-Contracting Parties in order to ensure the conservation and appropriate utilization of fish stocks and encouraging the sustainable development of fisheries.
- **Headquarters:** Victoria, Seychelles

Members

- IOTC has **30 members** (as of May 2023) including **India**, Pakistan, the UK, France etc.
- The Agreement is open to any state that has coasts within the Indian Ocean region (or adjacent seas) as well as any state that fishes for tuna in the Indian Ocean region.
- The agreement is also open to regional economic organizations.

MISCELLANEOUS

1. Rajyotsava Award recently seen in the news, it is related to which of the following states?
 - (a) Uttar Pradesh
 - (b) Karnataka
 - (c) Gujarat
 - (d) Tamil Nadu
2. Consider the following statements:
 1. India pumps up the most groundwater globally, more than China and the US combined.
 2. The National Aquifer Mapping and Management programme is being implemented by the Central Ground Water Board.

Which of the statements given above is/are correct?

 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
3. With reference to the State Food Safety Index (SFSI) 2023, consider the following statements:
 1. It is released on the occasion of World Food Safety Day.
 2. Tamil Nadu has topped the Index followed by Kerala.
 3. Among Union territories, Jammu and Kashmir secured the first rank.

How many statements given above are correct?

 - (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
4. Consider the following Indian cities:
 1. Prayagraj, Uttar Pradesh
 2. Chennai, Tamil Nadu
 3. Indore, Madhya Pradesh
 4. Kolkata, West Bengal
 5. Mumbai, Maharashtra
 6. Haridwar, Uttarakhand

How many of the above Indian cities are included in the UNESCO's Creative Cities Network (UCCN)?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) Only four

5. With reference to the *Personally Identifiable Information (PII)*, consider the following statements:

- 1. It is any information connected to a specific individual that can be used to uncover that individual's identity.
- 2. All the personal data is considered as the PII.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

EXPLANATIONS

1. (b)

In News: ISRO Chairman S. Somanath, golfer Aditi Ashok, and retired Supreme Court judge V. Gopala Gowda are among the 68 people and 10 organisations selected for the Rajyotsava Award - 2023 by the **Karnataka government for their contributions in different fields.**

- The Rajyotsava Award is the state's second-highest civilian **award given by the Karnataka government** annually to prominent writers, social workers and others.
- The 68th Karnataka Rajyotsava Awards will be conferred on the occasion of the state's formation day on November 1.
- This year is the golden jubilee of renaming Mysore state as Karnataka.

2. (c)

Both the statements are correct: As per the UN report on Ground water extraction, India pumps up the most groundwater globally — more than China and the US combined. According to the Central Ground Water Board, about 70 percent of the water used in the country is from groundwater sources.

The National Aquifer Mapping and Management programme is being implemented by CGWB as part of Ground Water Management and Regulation (GWM&R) scheme which is a Central Sector scheme.

3. (b)

Statement 1 is correct: Food Safety and Standards Authority of India (FSSAI) published the **State Food Safety Index (SFSI) 2023.**

- Since 2019, FSSAI has released the State Food Safety Index (SFSI) each year **on June 7** on the occasion of **World Food Safety Day.**

Statement 2 is not correct: Top States: Kerala has topped the index followed by **Punjab and Tamil Nadu**.

Statement 3 is correct: Among Union territories, **Jammu and Kashmir**, Delhi, and Chandigarh secured first, second, and third ranks.

4. (b)

Cities of India includes in UNESCO's Creative Cities Network (UCCN):

- UNESCO listed **Mumbai, Chennai, Hyderabad, Varanasi, Jaipur, Srinagar, Kozhikode and Gwalior** to the Creative Cities Network (UCCN).
 - **Gwalior ('Music') and Kozhikode ('Literature')** from India were recently added to the Creative Cities Network (UCCN) of UNESCO on **World Cities Day**.

UNESCO's Creative Cities Network (UCCN):

- It was **created in 2004** to promote cooperation with and among cities that have identified **creativity as a strategic factor for sustainable urban development**.

5. (a)

Statement 1 is correct:

- **Personally Identifiable Information (PII):** It is **any information connected to a specific individual** that can be used to uncover that individual's identity, such as their social security number, full name, or email address.
- It can be used alone or with other relevant data, and can identify an individual.

Statement 2 is not correct:

- **Not all personal data is considered PII**, and it **only refers to information that points to a particular person**.