

1. Which of the following statements is/are correct about the World Bank?

1. Its activities are primarily directed toward developed countries.
2. It contributes to human development (education, health), agriculture and rural development (irrigation, rural services), environmental protection only.
3. It is frequently criticised for setting the economic agenda for poorer countries, imposing stringent conditions on its loans, and imposing free market reforms.

Select the correct answer using the codes given below:

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

Answer: c

Explanation:

- Its activities are primarily directed toward developing countries.
- It contributes to human development (education, health), agriculture and rural development (irrigation, rural services), environmental protection (pollution reduction, establishment and enforcement of regulations), infrastructure development (roads, urban regeneration, and electricity), and governance (anti-corruption, development of legal institutions). It lends and grants money to member countries. As a result, it has a sizable impact on the economic policies of developing countries.
- It is frequently criticised for setting the economic agenda for poorer countries, imposing stringent conditions on its loans, and imposing free market reforms.
- Through special agreements with the United Nations, the separate, autonomous specialised agencies of the UN family establish standards and guidelines, assist in the formulation of policies, and provide technical assistance and other forms of practical assistance in virtually every field of economic and social endeavour, such as the World Bank, ILO, and WHO.

2. Consider the following statements about fiscal tools to reduce inflation:

1. Increased income taxes
2. Increased government spending
3. Subsidies reduction

Which of the above statement(s) is/are correct?

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

Answer: b

Explanation:

Policies to reduce inflation include:

- Fiscal tools – Increased income taxes and reduced government spending will suppress aggregate demand, resulting in slower growth and less demand-pull inflation. Increase in direct taxes, resulting in a decrease in real disposable income. Subsidies reduction is a fiscal measure that lowers inflation. Subsidies increase the fiscal deficit, which inflates the economy.
- Monetary tools – The Reserve Bank of India (RBI) determines the interest rates on government securities based on market rates. Increased interest rates on securities increase the cost of borrowing and act as a deterrent to consumption. This results in decreased inflation.

3. Consider the following statements about Fed tapering:

1. Tapering is a term that refers to the Federal Reserve's gradual reduction in its monthly asset purchases.
2. Federal Tapering is the process of reducing the rate of Qualitative Easing.

Which of the above statement(s) is/are correct?

- (a) 1 only
 (b) 2 only
 (c) Both 1 and 2
 (d) Neither 1 or 2

Answer: a

Explanation:

- Quantitative easing is a form of unconventional monetary policy that central banks use to stimulate the economy when conventional monetary policy is ineffective.
- Quantitative easing is implemented by central banks by purchasing specified amounts of financial assets from commercial banks and other private institutions, thereby increasing the monetary base and providing banks with more money to lend.
- Tapering is a term that refers to the Federal Reserve's gradual reduction in its monthly asset purchases.
- Thus, Federal Tapering is the process of reducing the rate of Quantitative Easing.
- Once the federal government begins to taper, banks will have less free money with which to lend loans. There is a possibility that loans will become more expensive and inflation will rise. This could have an effect on India's FDI and FII inflows.
- India is one of the markets that may be impacted, at least temporarily, as capital flows return to the US as the economy recovers. Outflows could exacerbate the rupee's decline.

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4. Consider the following regarding Sovereign Green Bonds

1. Sovereign Green Bonds (SGrB) tend to fund green and climate friendly projects which provide a positive impact on the environment.
2. As per features of newly released sovereign Green bond framework, the proceeds of SGrB will be deposited to the Consolidated Fund of India (CFI) and the Public Debt Management Cell will keep a track of proceeds.

Which of the following is/are incorrect?

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

Answer: d

Explanation:

Green Bond:

A Green Bond is a debt instrument designed specifically to raise funds for projects that have a positive impact on the climate or ecosystem. Unlike regular bonds, the funds obtained from investors through Green Bonds are exclusively directed towards environmentally beneficial initiatives, such as sustainable construction and renewable energy.

Features of sovereign Green bond framework:

- The Government of India will use the proceeds raised from Sovereign Green Bonds (SGrB) to finance and/or refinance expenditure (in parts or whole) for eligible green projects falling under 'Eligible Categories' such as renewable energy, eco-friendly transportation, climate change adaptation and green building projects.
- The proceeds will be deposited to the Consolidated Fund of India (CFI) in line with the regular treasury policy, and then funds from the CFI will be made available for eligible green projects.
- The Public Debt Management Cell (PDMC) will keep a track of proceeds within the existing guidelines regarding debt management, and monitor the allocation of funds towards eligible green expenditures. Unallocated proceeds, if any, will be carried forward to successive years for investment in eligible green projects.

5. Consider the following statements about advantage(s) of inflation in developing economies:

1. Inflation is typically associated with economic growth, hence it results in a higher rate of return for the investor in the form of equity.
2. It makes the domestic currency weaker in relation to the investor's preferred currency, hence, foreign investors who have invested in the host country's financial assets receive higher returns in the form of exchange rates.

Which of the above statement(s) is/are correct?

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

Answer: c.

Explanation:**Both the statements are correct.**

- Capital is a critical component of economic growth; because most countries are unable to meet their total capital requirements solely through domestic resources, they turn to foreign investors. Foreign direct investment (FDI) and foreign portfolio investment (FPI) are two of the most common methods by which investors invest in foreign economies. FPI is a term that refers to investing in financial assets such as stocks and bonds of foreign-based companies.
- Certain factors favour foreign investments, including the following:
 - Political factors: political stability and a pro-business environment.
 - Economic factors: the economy's strength, GDP growth trends, infrastructure, inflation, and a lower risk of currency depreciation.
- Because inflation is typically associated with economic growth, it results in a higher rate of return for the investor in the form of equity. Inflation also has an effect on the exchange rate; it makes the domestic currency weaker in relation to the investor's preferred currency. As a result, foreign investors who have invested in the host country's financial assets receive higher returns in the form of exchange rates.

6.Consider the following regarding Open Network For Digital Commerce (ONDC)

1. ONDC is an initiative of the Department of Telecommunication (DPIIT), Ministry of Communication.
2. It was incorporated as an intermediary under the Information Technology Act, 2000.

Which of the following is/are incorrect?

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

Answer: c**Explanation:**

- The Open Network for Digital Commerce (ONDC) is an endeavor of the Department of Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce. It has been incorporated as a company under Section 8 of the Companies Act, 2013.
- ONDC is an initiative aiming at promoting open networks for all aspects of exchange of goods and services over digital or electronic networks. ONDC is to be based on open-

sourced methodology, using open specifications and open network protocols independent of any specific platform.

- ONDC protocols would standardize operations like cataloguing, inventory management, order management and order fulfillment. Thus, small businesses would be able to use any ONDC compatible applications instead of being governed by specific platform centric policies. This will provide multiple options to small businesses to be discoverable over network and conduct business. It would also encourage easy adoption of digital means by those currently not on digital commerce networks.

7. In the context of systems of economy, presence of both private and public sector indicate which of the following?

- (a) Capitalism
- (b) Mixed Economy
- (c) Socialism
- (d) None of the above

Answer: b

Explanation:

The mixed economy concept evolved from Keynes' ideas. The term "mixed economy" refers to the coexistence of private and public enterprises. However, there is a condition attached: private enterprises must work for the greater good of society rather than for their own self-interest. Additionally, private enterprises may not be permitted in all sectors of the economy, such as those of national significance.

There are 3 types of economics system:-

- **Capitalism** - the private ownership of the means of production (capital) and a market economy for coordination. As-corporate capitalism
- **Mixed Economy Example** - American school, Japanese system, Nordic model, Social corporatism etc.
- **Socialism** - In this economic system, two coordinating mechanisms (planning and market) subdivided into planned socialist and market socialist systems.

8. Which of the following statements is/are correct the causes of Unemployment in India?

1. Unemployment can be caused by a variety of factors like population growth, a lack of appropriate skills, and poverty.
2. The degree-based system is successful to produce human resources with the necessary skills for specific job profiles in the economy.

Select the correct answer using the codes given below:

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

Answer: a

Explanation:

- Unemployment refers to a situation in which an individual who is willing to work at the current wage rate is unable to find work.
- Unemployment is becoming an increasingly serious problem in India today.
- Unemployment can be caused by a variety of factors, but the most common are population growth, a lack of appropriate skills, and poverty.
- While literacy rates have increased over the last few decades, India's education system continues to have a fundamental flaw.
- The curriculum is primarily theoretical in nature and does not provide the necessary vocational training to compete in today's economic environment.
- The degree-based system fails to produce human resources with the necessary skills for specific job profiles in the economy.
- Population explosion is one of several factors, but not the only one.
- Rapid population growth is the primary reason for the country's rising unemployment rate.
- According to a survey conducted by the Centre for Monitoring Indian Economy, India's unemployment rate will be 23.5 percent in April 2020. (CMIE)
- India's current population is 1.39 billion.

9. Consider the following statements about the Market Stabilisation scheme:

1. It was launched in April 2004 in accordance with the terms of a Memorandum of Understanding between the private sector and the Reserve Bank.
2. The cash is held in a separate government account with the Reserve Bank of India.
3. Government paper issuances under the Market Stabilisation Scheme are undertaken to absorb rupee liquidity created by persistent capital flows.

Which of the above statement(s) is/are correct?

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

Answer: b

Explanation:

- The Market Stabilisation Scheme (MSS) was launched in April 2004 in accordance with the terms of a Memorandum of Understanding between the Government and the Reserve Bank, under which the Government issues securities specifically for the purpose of stabilisation operations.
- This monetary management tool was introduced in 2004. Sufficient longer-term liquidity generated by large capital inflows is absorbed through the sale of short-dated government securities and treasury bills.
- The cash is held in a separate government account with the Reserve Bank of India. Thus, the instrument possesses both SLR and CRR characteristics.
- Government paper issuances under the Market Stabilisation Scheme are undertaken to absorb rupee liquidity created by persistent capital flows.
- To offset the monetary and fiscal impact of this instrument, the proceeds from the MSS were parked in a separate deposit account with the Reserve Bank that was used exclusively for the redemption and/or buyback of paper issued under the MSS.

10. Consider the following statements about Negative interest rates:

1. Rather than earning interest on deposits, depositors must make regular payments to the bank to keep their money.
2. Often, this type of situation is addressed through the use of a tight monetary policy.

Which of the above statement(s) is/are correct?

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

Answer: a**Explanation:**

- Negative interest rates refer to a situation in which cash deposits are subject to a storage charge at the bank rather than earning interest. Rather than earning interest on deposits, depositors must make regular payments to the bank to keep their money. Negative interest rates can happen during deflationary periods, when people and businesses save money instead of spending it. This could lead to a dramatic drop in demand, dropping prices even further.
- Often, this type of situation is addressed through the use of a loose monetary policy. However, with persistent deflationary pressures, simply cutting the central bank's interest rate to zero may not be enough to stimulate credit and lending growth. Note: Central banks in Europe, Scandinavia and Japan have recently implemented a negative interest rate policy (NIRP) on excess bank reserves in the financial system.

11. Which of the following rights are part of Article 21 according to the Supreme Court judgment in the Menaka case

1. Right to shelter
2. Right against handcuffing
3. Right to reputation
4. Right to sleep
5. Right to road in hilly areas

Which of the statements given above is/are correct ?

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

Ans : d

Exp :

The Supreme Court has reaffirmed its judgement in the Menaka case in the subsequent cases. It has declared the following rights as part of Article 21:

- (1) Right to live with human dignity.
- (2) Right to decent environment including pollution free water and air and protection against hazardous industries.
- (3) Right to livelihood.
- (4) Right to privacy.
- (5) Right to shelter.
- (6) Right to health.
- (7) Right to free education up to 14 years of age.
- (8) Right to free legal aid.
- (9) Right against solitary confinement.
- (10) Right to speedy trial.
- (11) Right against handcuffing.
- (12) Right against inhuman treatment.
- (13) Right against delayed execution.
- (14) Right to travel abroad.
- (15) Right against bonded labour.
- (16) Right against custodial harassment.

- (17) Right to emergency medical aid.
- (18) Right to timely medical treatment in government hospital.
- (19) Right not to be driven out of a state.
- (20) Right to fair trial.
- (21) Right of prisoner to have necessities of life.
- (22) Right of women to be treated with decency and dignity.
- (23) Right against public hanging.
- (24) Right to road in hilly areas.
- (25) Right to information.
- (26) Right to reputation.
- (27) Right of appeal from a judgment of conviction
- (28) Right to family pension
- (29) Right to social and economic justice and empowerment
- (30) Right against bar fetters
- (31) Right to appropriate life insurance policy
- (32) Right to sleep
- (33) Right to freedom from noise pollution
- (34) Right to sustainable development
- (35) Right to opportunity.

12. What is meant by Integrity as defined by the Minister of Personnel?

- (a) It is defined as behaving in an open, fair, and transparent manner consistently honoring one's commitments and working to uphold public service values
- (b) It implies trustworthiness and incorruptibility to a degree that one is capable of being false to a trust, responsibility, or pledge. probity implies tried and proven honesty or integrity.
- (c) It is the right to be treated in a humane manner and in such a way that one does not preserve a person's mental and physical "wholeness"
- (d) None of the above

Ans : a

Exp :

Integrity is defined as behaving in an open, fair, and transparent manner consistently honoring one's commitments and working to uphold public service values.

13. With reference to Legislative powers of the Governor , consider the following statements:

1. He can promulgate ordinances when the state legislature is not in session
2. These ordinances must be approved by the state legislature within six months from its reassembly
3. He cannot also withdraw an ordinance without the advice of council of ministers

Which of the statements given above is/are correct?

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

Ans: d

Exp :

He can promulgate ordinances when the state legislature is not in session. These ordinances must be approved by the state legislature within six weeks from its reassembly. He can also withdraw an ordinance anytime. This is the most important legislative power of the governor

14. With reference to the President election , consider the following statements :

1. The electoral college of the President election consists of the elected members of the legislative assemblies of the states and the elected members of both the Houses of Parliament only
2. The nomination of a candidate for election to the office of President must be subscribed by at least 100 electors as proposers and 50 electors as seconders
3. Every candidate has to make a security deposit of ₹ 25,000 in the Reserve Bank of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1 and 3 only
- (d) None of the above

Ans : d

Exp :

The President is elected not directly by the people but by members of electoral college consisting of:

1. the elected members of both the Houses of Parliament;
2. the elected members of the legislative assemblies of the states; and
3. the elected members of the legislative assemblies of the Union Territories of Delhi and Puducherry
4. He should not hold any office of profit under the Union government or any state government or any local authority or any other public authority. A sitting President or VicePresident of the Union, the Governor of any state and a minister of the Union or any state is not deemed to hold any office of profit and hence qualified as a presidential candidate.

The nomination of a candidate for election to the office of President must be subscribed by at least 50 electors as proposers and 50 electors as seconders. Every candidate has to make a security deposit of ₹15,000 in the Reserve Bank of India.

15.Consider the following statements regarding Appellate Jurisdiction of the Supreme Court:

1. The Supreme Court is primarily a court of appeal and hears appeals against the judgements of the lower courts
2. It enjoys a wide appellate jurisdiction which can be classified under four heads: (a) Appeals in constitutional matters. (b) Appeals in civil matters. (c) Appeals in criminal matters. (d) Appeals by special leave.

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

Ans : c

Exp :

As mentioned earlier, the Supreme Court has not only succeeded the Federal Court of India but also replaced the British Privy Council as the highest court of appeal. The Supreme Court is primarily a court of appeal and hears appeals against the judgements of the lower courts. It

enjoys a wide appellate jurisdiction which can be classified under four heads: (a) Appeals in constitutional matters. (b) Appeals in civil matters. (c) Appeals in criminal matters. (d) Appeals by special leave.

16. Consider the following statements regarding Inter-State Councils:

1. Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states
2. The council's function to enquire and advice upon inter-state disputes is complementary to the Supreme Court's jurisdiction under Article 131 to decide a legal controversy between the governments
3. The Council can deal with any controversy whether legal or nonlegal, but its function is advisory unlike that of the court which gives a binding decision

Which of the statements given above is/are correct?

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

Ans : d

Exp :

Article 263 contemplates the establishment of an Inter-State Council to effect coordination between the states and between Centre and states. Thus, the President can establish such a council if at any time it appears to him that the public interest would be served by its establishment. He can define the nature of duties to be performed by such a council and its organisation and procedure. Even though the president is empowered to define the duties of an inter-state council, Article 263 specifies the duties that can be assigned to it in the following manner: (a) enquiring into and advising upon disputes which may arise between states; (b) investigating and discussing subjects in which the states or the Centre and the states have a common interest; and (c) making recommendations upon any such subject, and particularly for the better co-ordination of policy and action on it. "The council's function to enquire and advice upon inter-state disputes is complementary to the Supreme Court's jurisdiction under Article 131 to decide a legal controversy between the governments. The Council can deal with any controversy whether legal or nonlegal, but its function is advisory unlike that of the court which gives a binding decision."

17. Consider the following in respect of ‘ Closure Motion ’:

1. Guillotine Closure in which only important clauses are taken up for debate and voting and the intervening clauses are skipped over and taken as passed.
2. Kangaroo Closure in which undiscussed clauses of a bill or a resolution are also put to vote along with the discussed ones due to want of time

Which of the above statements is/are correct?

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

Ans : d

Exp :

- Kangaroo Closure in which only important clauses are taken up for debate and voting and the intervening clauses are skipped over and taken as passed.
- Guillotine Closure in which undiscussed clauses of a bill or a resolution are also put to vote along with the discussed ones due to want of time

18. The Second Schedule Provisions relating to the emoluments, allowances, privileges and so on of which of the following persons ?

1. The Comptroller and Auditor General of India
2. The Deputy Chairman of the Rajya Sabha
3. The Deputy Speaker of the Legislative Assembly in the states
4. The Attorney General of India
5. The Deputy Chairman of the Legislative Council in the states
6. The Governors of State

Which of the above statements is/are correct?

- (a) 1,2,3
- (b) 1,2,4,5

- (c) 1,3,4,5,6
- (d) 1,2,3,5,6

Ans: d

Exp :

Second Schedule Provisions relating to the emoluments, allowances, privileges and so on of the following persons :

1. The President of India
2. The Governors of States
3. The Speaker and the Deputy Speaker of the Lok Sabha
4. The Chairman and the Deputy Chairman of the Rajya Sabha
5. The Speaker and the Deputy Speaker of the Legislative Assembly in the states
6. The Chairman and the Deputy Chairman of the Legislative Council in the states
7. The Judges of the Supreme Court
8. The Judges of the High Courts
9. The Comptroller and Auditor General of India

19. Consider the following in respect of ‘Panchayats (Extension to the Scheduled Areas) act, 1996’:

1. Dileep Singh Bhuria Committee, PESA Act was enacted in 1996 for tribal empowerment and to bring them into mainstream
2. Ministry of Panchayati Raj is nodal Ministry for implementation of provisions of PESA in States

Which of the above statements is/are correct?

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

Ans : c

Exp :

- Based on recommendations of Dileep Singh Bhuria Committee, PESA Act was enacted in 1996 for tribal empowerment and to bring them into mainstream.
- Ministry of Panchayati Raj is nodal Ministry for implementation of provisions of PESA in States.
- PESA Act is called a 'Constitution within the Constitution'.
- It provides for extension of provisions of Part IX of Constitution relating to Panchayats to Scheduled Areas of 10 States under Article 244(1) read with Schedule 5, with certain modifications and exceptions. o Ten states are Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, and Telangana

20. With reference to the Flag Code of India (FCI), 2002 , consider the following statements:

1. It allows national flag to be flown at day and night if it has been hoisted in the open or on house of a member of public.
2. Changes allow machine-made polyester to be used in production of national flag. o Earlier, only flags made of handspun and handwoven khadi were permitted.

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

Ans : c

Exp :

- Code allows the national flag to be flown at day and night and hoisted in the open or on house of a member of public.
- Earlier, tricolor was allowed to be flown from sunrise to sunset, irrespective of weather conditions.
- It governs the display of National Flag by private, public, and government institutions.
- Changes allow machine-made polyester to be used in production of national flag. instead of handspun and handwoven khadi

21. Which of the following statements is/are correct with reference to micro-climate?

1. A microclimate is a continental-level collection of atmospheric conditions that vary from those in other continents.
2. Microclimates can be found only around bodies of water, which can cool the local environment.

Select the correct answer using the codes given below:

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

Answer: d

Explanation:

Statement 1 is not correct.

A microclimate (or micro-climate) is a localised collection of atmospheric conditions that vary from those in the surrounding region, usually by a small margin but sometimes by a significant margin. The word may be used to describe areas as small as a few square metres or square feet (for example, a garden bed or a cave) to as wide as many square kilometres or square miles.

Statement 2 is not correct.

- Microclimates can be found around bodies of water, which can cool the local environment, or in densely populated areas, where brick, concrete and asphalt absorb the sun's energy, heat up and re-radiate it to the surrounding air, creating an urban heat island.
- Forests raise the air's relative humidity and reduce evaporation by transpiration. Forests also shield animals and crops from hot, dry winds, as well as heavy, cold winds and sun rays. Desiccation and vegetative retrogression are often prevented by forests.
- They absorb CO₂, an effective greenhouse gas, during photosynthesis, resulting in a lower temperature (heat is a better term) in the atmosphere, which aids in temperature control.

22. With reference to the Abohar Wildlife Sanctuary, consider the following statements:

1. It is located in the Fazilka district of uttarakhand and is a private nature reserve.
2. This sanctuary is well-known for its black buck and bull bill and the whole Sanctuary region is made up of 13 Bishnoi communities'

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

Answer: b

Explanation:

Abohar Wildlife Sanctuary

- It is located in the Fazilka District of Punjab.
- It is unique in that it is an open sanctuary, comprising farmlands of 13 Bishnoi villages. Herds of black buck, the indigenous antelope, with their distinctive twisted horns, can be found wandering freely through the villages and even homes.
- The blackbuck was notified as the State animal of Punjab in 1989 and its presence in the State is confined to the AWS due to the unique habitat of semi-arid plains consisting of agricultural fields, intermittent fallow-barren lands, scattered sand dunes, sand mounds and ridges.

23. Which of the following statements is/are correct regarding India's Great Escarpment?

1. The Mandovi, Tungabhadra, Krishna, and Godavari are just a few notable rivers that originate in the Western Ghats and flows eastwards.
2. Anamudi peak is India's highest point south of the Himalayas.

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

Answer: b.

Explanation:

Statement 1 is not correct:

- West-flowing: Rivers like the Periyar, Bharathappuzha, Netravati, Sharavathi, and Mandovi come from the Western Ghats and flow in that direction.
- Because they have a steeper gradient, the west-flowing rivers of the Western Ghats move quickly. As a result, the Western Ghats are better suited for producing hydroelectricity.
- The rivers that rise in the Western Ghats and flow steeply eastward include the Godavari, Krishna, and Kaveri, as well as other smaller/tributary rivers including the Tunga, Bhadra, Bhima, Malaprabha, Ghataprabha, Hemavathi, and Kabini.

Statement 2 is correct:

- Anaimudi is the tallest peak in the Western Ghats, standing at 2695 metres or 8842 feet. It is referred to as the Everest of South India. Anaimudi means "Elephant's head." It is located on the state of Kerala's boundary between the districts of Ernakulam and Idukki.

24. With reference to the El Nino, consider the following statements:

1. El Nino is the term used to describe the sporadic formation of warm ocean surface waters along the coasts of Ecuador and Peru.
2. It delivers convective storms and hurricanes to the central Pacific, dryness to South America's equatorial coast, and convective storms and rain to the western Pacific.

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

Answer: a

Explanation:

- El Nio is the term used to describe the sporadic formation of warm ocean surface waters along the coasts of Ecuador and Peru.
- When this warming takes place, the typical upwelling of nutrient-rich deep ocean water is greatly diminished.
- Along the coasts of Peru and Ecuador, warm ocean water is accumulated by the equatorial countercurrent.
- This buildup of warm water lowers the thermocline in the eastern Pacific Ocean, which prevents cold deep ocean water from rising off the coast of Peru.
- According to the weather, the emergence of an El Nio causes dryness in the western Pacific, rain in South America's equatorial coast, and convective storms and hurricanes in the central Pacific.

25. Consider the following statements about Red Soil:

1. On the uplands, the red soils are poor, gravelly and porous but in the lower areas they are rich, deep, dark and fertile.
2. They are fairly rich in potash and potassium.
3. The colour is more due to the high percentage of iron oxide content.

Which of the above statement(s) is/are correct?

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

Answer: c.

Explanation:

Red Soils:

- Red soils along with its minor groups form the largest soil group of India.
- The main parent rocks are crystalline and metamorphic rocks like acid granites, gneisses and quartzites.

Characteristics of Red Soils:

- The texture of these soils can vary from sand to clay, the majority being loams.
- On the uplands, the red soils are poor, gravelly and porous. But in the lower areas they are rich, deep, dark and fertile. **Statement 1 is correct.**

Chemical Composition of Red Soils:

- They are acidic mainly due to the nature of the parent rocks. The alkali content is fair.

- They are poor in lime, magnesia, phosphates, nitrogen and humus.
- They are fairly rich in potash and potassium. **Statement 2 is correct.**

Colour of Red Soils:

- The red colour is due to the presence of iron oxide.
- When limestone, granites, gneisses and quartzites are eroded the clay enclosed within the rocks remains intact with other forms of insoluble materials.
- In oxidising conditions, rust or iron oxide develops in the clay, when the soil is present above the water table giving the soil a characteristic red colour.
- The colour is more due to the wide diffusion rather than high percentage of iron oxide content. **Statement 3 is not correct.**
- The red soils are mostly loamy and hence cannot retain water like the black soils.
- The red soils, with the proper use of fertilisers and irrigation techniques, give good yield of cotton, wheat, rice, pulses, millets, tobacco, oil seeds, potatoes and fruits.

26. Which of the following statements is/are correct about Bulk reducing industries?

1. An industry in which the inputs weigh less than the final product
2. Mining is one of the best example of this industry.

Select the correct answer using the codes given below:

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

Answer: d.

Explanation:

Bulk Reducing Industry

- An industry in which the inputs (materials, etc.) weigh more than the final product (raw materials weigh more than finished goods). **Statement 1 is not correct.**
- Requires a location close to the source of inputs to minimise transportation costs
 - Copper Industry: The finished copper bar is lighter than the copper ore from which it is made. Numerous steps in the copper manufacturing process are bulk reducing. Additionally, the majority of foundries must be located near energy sources (part of inputs)
 - Industry of Iron and Steel
 - Mills of Sugarcane

Industry of Bulk Gaining

- Industry that manufactures products that increase in volume or weight during production (finished product weighs more than the raw materials)
- Must be located close to the point of sale in order to minimise transportation costs
- Transportation is more expensive

27. With reference to the Cold-water corals , consider the following statements:

1. Cold-water corals, also known as deep water corals, are marine invertebrates that can hunt and protect themselves by using cnidocytes.
2. Globally, cold-water coral reefs outweigh tropical reefs.

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

Answer: c**Explanation:**

- Cold-water corals, also known as deep water corals, are marine invertebrates that can hunt and protect themselves by using harpoon-shaped cells known as cnidocytes.
- cold-water corals are found in deep, frigid waters (39 to 55 degrees Fahrenheit). According to the United Nations Environment Programme, Cold-water coral reefs are more prevalent than tropical reefs.
- The Rost Reef is the biggest coldwater coral reef in the world.

28. Consider the following statements about traditional water conservation structures:

1. Phad is a community-managed irrigation system located in Maharashtra's Godavari's river basin
2. Zing are small tanks, which are found in Ladakh, collect melting glacier water.
3. Kuhls are surface water channels found in Kashmir's mountainous regions.

Which of the above statement(s) is/are correct?

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

Answer: c.**Explanation:**

- Phad – It is a community-managed irrigation system located in Maharashtra's Tapi river basin. It begins with the construction of a check dam across a river and canals to transport water to agricultural blocks equipped with outlets to ensure that excess water is drained from the canals. **Statement 1 is not correct.**
- Zing – These small tanks, which are found in Ladakh, collect melting glacier water. Water is transported from the glacier to the tank via a network of guiding channels. **Statement 2 is correct.**
- Kuhls – These are surface water channels found in Himachal Pradesh's mountainous regions. Channels transport glacial water from rivers and streams to fields. **Statement 3 is not correct.**

29. Which of the following statements is/are correct about Nilambur teaks?

1. Nilambur teak has found its place in the Geographical Indications (GI) Registry.
2. It is native to the state of Himachal Pradesh.
3. The Nilambur forests are also known for their tribal settlements, vast rain forests, waterfalls and the world's first Teak Museum.

Select the correct answer using the codes given below:

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

Answer: b.

Explanation:

- Kerala's Nilambur teak aka Malabar teak has found its place in the Geographical Indications (GI) Registry. **Statement 1 is correct but statement 2 is not correct.**
- The golden brown teak is known for its log dimensions, desired wood figure and wide reputation in the world of trade.
- Its durability is attributed to the synergistic effect of total extensive components and the resistance to fungal decay to naphthoquinone and derivatives it contains.
- The hydrophobicity, anti-oxidant properties and oily nature are due to a caoutchouc compound.
- The Nilambur forests are also known for their tribal settlements, vast rain forests, waterfalls and the world's first Teak Museum. **Statement 3 is correct.**

30. Arrange the following seas in north to south order:

1. Borneo.
2. Makassar.
3. Jarkarata.
4. Java.

Select the correct option from the codes given below:

- (a) 1-2-3-4
- (b) 2-1-4-3
- (c) 2-1-4-3
- (d) 1-3-4-2

Answer: a

Explanation:



31.Consider the following regarding genome sequencing

1. It is the process of identifying and determining the order of the nucleotides in a particular segment of DNA.
2. Helps to develop personalized medicines for individuals.
3. Helps to understand the mutation rate of virus infectivity.
4. Helps to reduce chemical fertilisers by understanding the susceptibility of plants to pests.

Which of the following are correct?

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

Answer: d

Explanation:

Genome sequencing refers to the process of identifying and determining the order of nucleotides in a specific segment of DNA. This process is important for understanding the genetic makeup of an organism, as it allows scientists to study the genetic information encoded in an organism's DNA.

Benefits of Genome sequencing

- To develop personalised medicine and therapies
- Disease can be determined before they develop by mapping the characteristics of the disease
- By understanding the genetic basis of the susceptibility of plants to pests, productivity can be improved with reduced usage of the chemical fertilisers.
- By gaining international cooperation global science will also benefit because of its diversity it brings to genetic studies.

- Diseases like cystic fibrosis and thalassemia which are due to single gene malfunctioning can be countered with a database of genome.
- It also helps us to understand the rate of mutation in increasing virus infectivity.

32. Which of the following statements is/are correct about Methane Gas?

1. Methane has a very long lifetime in the atmosphere i.e. at least a century.
2. As a result, an effort to limit methane emissions would result in only long term greenhouse effect reduction.

Select the correct answer using the codes given below:

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

Answer: d.

Explanation:

- CFCs have a 20- to 100-year lifespan in the atmosphere, therefore one free chlorine atom from a CFC molecule can cause a lot of damage, destroying ozone molecules for a long period.
- Methane has a short lifetime in the atmosphere; within a decade or two, a molecule of methane is oxidised to water and carbon dioxide, primarily by interaction with another trace gas, the hydroxyl radical OH
- As a result, unlike carbon dioxide (which lingers in the atmosphere longer than methane), a coordinated effort to limit methane emissions would result in almost instantaneous greenhouse effect reduction.

33. Which of the following statements is/are correct about Quantum Dots?

1. A quantum dot is a nanoparticle formed of silicon, cadmium selenide, among other semiconductor materials
2. They're basically nanometer-sized crystals, about 20,000 times larger than the width of a human hair
3. Quantum-dot therapy has been found to kill 92 percent of drug-resistant bacterial cells in a lab-grown culture.

Select the correct answer using the codes given below:

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

Answer: c.

Explanation:

- A quantum dot is a nanoparticle formed of silicon, cadmium selenide, cadmium sulphide, or indium arsenide, among other semiconductor materials.
- They're basically nanometer-sized crystals, about 20,000 times smaller than the width of a human hair.
- They're each one millionth of a millimetre in size. Because of their exceedingly small size and structure, they exhibit unique electrical conduction capabilities.

Quantum-dot therapy and drug administration

- Bacteria rely on “redox” reactions, which are those in which oxygen is added or removed (reduction and oxidation, respectively). When multiple Quantum dots are "stimulated" in close proximity, they release molecules that can be reduced or oxidised by bacteria's reactive components.
- This essentially destroys their intercellular functions, kills them, and stops their cell proliferation. This approach has been found to kill 92 percent of drug-resistant bacterial cells in a lab-grown culture while leaving other cells alone.
- Quantum dots can be tweaked, or customised, with an atom added or withdrawn to create a new substance, property, or therapy, while using data from linked clinical trials or medications, as superbugs emerge, adapt, and fight back.

34.Consider the following statements:

1. Bioprospecting is the process of discovering and commercialising new biological resources-based goods.
2. Biomining is a word that refers to the utilisation of bio-resources by multinational corporations and other organisations without sufficient permission from the governments and people involved, and without remuneration.
3. Biopiracy is a process that uses prokaryotes or fungi to extract metals from ores and other solid materials.

Which of the above statement(s) is/are correct?

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

Answer: a.

Explanation:

- Bioprospecting is the process of discovering and commercialising new biological resources-based goods. Despite the fact that indigenous knowledge is intuitively useful, bioprospecting has just lately begun to use it in focusing screening efforts for bioactive chemicals.
- Biopiracy is a word that refers to the utilisation of bio-resources by multinational corporations and other organisations without sufficient permission from the governments and people involved, and without remuneration.

- Biomining is a process that uses prokaryotes or fungi to extract metals from ores and other solid materials. These organisms produce a variety of organic compounds that chelate metals in the environment and transport them back to the cell, where they are normally utilised to coordinate electrons.

35. Which of the following statements is/are correct with relation to TrueNat?

1. TrueNat, an indigenous molecular diagnostic tool for tuberculosis (TB) detection.
2. Bharat Biotech, an Indian company, created the test.

Select the correct answer using the codes given below:

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

Answer: a.

Explanation

- TrueNat, an indigenous molecular diagnostic tool for tuberculosis (TB) detection, has been endorsed by the World Health Organization (WHO).
- TrueNat is a revolutionary molecular test that can diagnose tuberculosis in under an hour and check for rifampicin resistance.
- MolBio Diagnostics Pvt Ltd Goa, an Indian company, created the test.
- Using the polymerase chain reaction (PCR) technology, the test detects tuberculosis germs quickly.
- The polymerase chain reaction (PCR) is a typical laboratory technique for making multiple copies of a specific area of DNA (millions or billions).
- The purpose of PCR is to create enough copies of the target DNA region to be examined or utilised in other ways.
- PCR is used in a variety of fields in biology and medicine, including molecular biology, medical diagnostics, and even some aspects of ecology.

36. Which of the following statements is/are correct in relation to West Nile fever?

1. It's a neurological condition spread by infected mosquito bites.
2. 90% of those who are impacted experience neurologic problems that lead to death.

Select the correct answer using the codes given below:

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

Answer: a.

Explanation:

West Nile fever

- West Nile fever is a zoonotic disease caused by the West Nile virus, a flavivirus.
- It's a neurological condition spread by infected mosquito bites (of all types).
- Fever, headaches, nausea, and other symptoms are common.
- 10% of those who are impacted experience neurologic problems that lead to death. In 80 percent of instances, symptoms do not occur.
- The West Nile virus is related to the viruses that cause yellow fever and Japanese encephalitis.

Nipah virus

- Is a zoonotic virus (one that spreads from animals to humans) that can also be spread between people through contaminated food.
- It causes a wide spectrum of symptoms in infected humans, ranging from asymptomatic (subclinical) infection to acute respiratory sickness and deadly encephalitis.
- The virus can also cause severe sickness in animals like pigs, causing producers to lose a lot of money.
- Although there have been a few outbreaks in Asia, the Nipah virus infects a wide range of animals and causes severe sickness and death in humans, making it a public health concern.
- Illness with the Nipah virus in humans can manifest in a variety of ways, from asymptomatic infection (subclinical) to acute respiratory infection and deadly encephalitis.
- The case mortality rate is estimated to be between 40% and 75%. This rate varies per outbreak, depending on local epidemiological surveillance and clinical management skills.
- Nipah virus can be spread to humans through animals (such as bats or pigs), contaminated foods, or direct human-to-human transmission.
- Nipah virus is spread by fruit bats of the Pteropodidae family.
- Neither humans nor animals have access to a medication or vaccine. Humans' primary treatment is supportive care.
- According to the 2018 annual assessment of the WHO R&D Blueprint list of priority diseases, the Nipah virus has an urgent need for more research and development.

37. Which of the following statements is/are correct about Non-Communicable Diseases?

1. Ageing, an unhealthy diet, a lack of physical activity, high blood pressure, high blood sugar, high cholesterol, and being overweight are all risk factors for NCDs.
2. National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS) goals include health promotion initiatives as well as opportunistic screening for non-communicable diseases (NCDs), such as cancer.

Select the correct answer using the codes given below:

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

Answer: c.

Explanation:

Both the statements are correct:

Non-Communicable Diseases (NCDs)

- According to an ICMR report titled "India: Health of the Nation's States," the contribution of non-communicable diseases (NCDs) to total death in the country was 61.8 percent in 2016, up from 37.9 percent in 1990.
- Tuberculosis is a contagious illness.
- Due to epidemiological change, fewer fatalities for communicable, maternal, neonatal, and nutritional disorders are documented in Kerala, Goa, and Tamil Nadu, raising the share of NCDs in total deaths.
- Ageing, an unhealthy diet, a lack of physical activity, high blood pressure, high blood sugar, high cholesterol, and being overweight are all risk factors for NCDs.
- Despite the fact that public health is a state responsibility, the federal government supports state efforts.
- Under the National Health Mission, the National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS) is being implemented (NHM). The program's goals include health promotion initiatives as well as opportunistic screening for non-communicable diseases (NCDs), such as cancer.
- Under the National Health Mission, population-based screening for common NCDs such as diabetes, hypertension, and malignancies (oral, breast, and cervical cancer) has been begun (NHM).
- Deendayal outlets for Affordable Medicines and Reliable Implants for Treatment (AMRIT) have opened in 159 institutions/hospitals with the goal of providing cancer and cardiovascular disease patients with cheap drugs and implants.
- The Department of Pharmaceuticals established Jan Aushadhi outlets to provide generic medications at low pricing.

38. Consider the following regarding Artemis I Mission

1. Its main objective is to accommodate human presence on the moon
2. It was launched by SpaceX

Which of the following is/are correct?

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

Answer: a

Explanation:

- Artemis I, which is named after Apollo's sister in Greek mythology, is an unmanned mission conducted by NASA. It serves as the agency's successor to the Apollo lunar missions from fifty years ago and aims to test the Space Launch System (SLS) rocket and Orion crew capsule.
- The SLS is NASA's largest new vertical launch system since the Saturn V rockets used in the 1960s and 1970s. Artemis I is the first in a series of missions that will become progressively more complex, aimed at establishing a long-term human presence on the Moon for decades to come.

- The mission's primary objectives are to test the Orion's systems in a spaceflight environment and ensure a safe re-entry, descent, splashdown, and recovery before the first crewed flight on Artemis II. Even though it is primarily a lunar orbiter mission, Artemis I has a return-to-Earth target, unlike most other orbiter missions.

Artemis II

Scheduled for launch in 2024, Artemis II will be a manned mission of the Orion spacecraft aimed at verifying the proper functioning of all systems when carrying humans. Like Artemis I, it will involve a crew of four astronauts and the spacecraft will orbit the Earth twice.

Artemis III

Planned for 2025, the mission aims to transport astronauts to the moon, marking the first time humans have set foot on the moon since the Apollo missions.

39. Consider the following regarding iNOVACC

1. India has approved the world's first intranasal vaccine for COVID-19 for emergency use.
2. This vaccine is based on a recombinant replication deficient adenovirus vector.

Which of the following is/are correct?

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

Answer: c

Explanation:

- Bharat Biotech's iNOVACC has been granted emergency use approval in India, making it the world's first intranasal vaccine for COVID-19. The vaccine is a recombinant replication deficient adenovirus vectored vaccine that contains a pre-fusion stabilized spike protein.
- One of the benefits of iNOVACC is that it not only produces antibodies but also reduces the risk of transmission, which is not the case for other COVID-19 vaccines that only produce antibodies.
- Additionally, iNOVACC activates immunity in the cells found in the tissues lining the nose, mouth, and lungs, in addition to the immunity produced in the blood.
- The vaccine is also easy to administer, eliminating the need for syringes and needles, and is highly compliant, making it suitable for both children and adults.

40. Consider the following regarding BrahMos

1. The BrahMos is a supersonic cruise missile system with a long range that can be launched from land, sea, and air to target both surface and sea-based objectives.
2. The missile has three stages, with the first stage being a solid propellant booster engine and the second stage being a liquid ramjet.

Which of the following is/are incorrect?

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

Answer:b

Explanation:

- BrahMos is a supersonic cruise missile system that can be launched from land, sea, and air to target both surface and sea-based objectives.
- It is the result of a collaboration between the Defence Research and Development Organisation (DRDO) of India and NPO Mashinostroyeniya of Russia, and is named after the Brahmaputra and Moskva rivers.
- The missile operates on a two-stage system, with a solid propellant booster engine serving as the first stage and a liquid ramjet as the second stage. It operates on the principle of fire and forget.
- Initially, the range of the missile was limited to 290 km due to obligations of the Missile Technology Control Regime (MTCR). However, following India's admission to the MTCR in 2016, the range was extended to 450 km and is expected to be further increased to 600 km in the future.

41. Consider the following in respect of 'Vaquita Porpoise':

1. It is listed as an critically endangered species on the IUCN Red List.
2. It is unique among porpoises in that it is the only species found in warm seas.

Which of the above statements is/are correct?

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

Answer: b

Explanation:

- The dolphin, whale, and porpoise species collectively make up the cetacean family.
- Since they last shared an ancestor roughly 15 million years ago, dolphins are only distantly related to them.
- The vaquita (*Phocoena sinus*) is the smallest cetacean on the planet. Its name translates to "little cow" in Spanish.
- Its most distinguishing characteristic is a black ring around the eyes, as well as a proportionately huge dorsal fin.
- It is unique among porpoises in that it is the only species found in warm seas, and the size of the dorsal fin is thought to be an adaptation to this, enabling excess body heat to evaporate.

Protection status:

IUCN red list : critically endangered.

CITES: Appendix I

42. With reference to the Greenhouse Gas Bulletin report, consider the following statements:

1. It displays the average surface mole fractions of carbon monoxide (CO), methane (CH₄), and nitrous oxide (N₂O).
2. It was released annually by the World Meteorological organization.

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

Answer: b

Explanation:

- The Greenhouse Gas Bulletin Report is released annually by the World Meteorological Organization (WMO).
- The report compares the average surface mole fractions of three greenhouse gases: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).
- The report compares the current mole fractions of these greenhouse gases with their levels from the previous year and preindustrial times.
- The report highlights the increase in greenhouse gas concentrations and their impact on global warming and climate change.

43. Which of the following statements best describes the ' Fujiwhara Effect ', recently seen in the news?

- (a) It is the change observed in Earth's gravity produced by a change in centrifugal acceleration generated by eastbound or westbound velocity.
- (b) It is a phenomenon that occurs when two tropical storms interact with each other under specific conditions.
- (c) It is an unavoidable and sometimes unexpected series of events caused by an act that affects a system.
- (d) The establishment of a positive charge on the surface of a thin insulating layer is caused by the emission of secondary electrons from its surface.

Answer: b

Explanation:

- The Fujiwhara Effect is an interaction between two tropical storms that meet certain criteria.

- These storms must form around the same time and in the same ocean region.
- The distance between their centers or eyes must be less than 1,400 km.
- The intensity of these storms can vary between a depression, with wind speeds under 63 km per hour, and a super typhoon, with wind speeds over 209 km per hour.
- The effect occurs when these two storms begin to rotate around each other, creating a dance-like pattern.
- This interaction can cause the storms to change their course, speed, and intensity.
- The term "Fujiwhara Effect" comes from the Japanese meteorologist Sakuhei Fujiwhara, who first described the phenomenon in the early 1920s.

44. Consider the following pairs:

1. Ansupa Lake - Assam
2. Tampara Lake - Orissa
3. Belasagar Lake - Telangana

Which of the pairs given above is/are NOT correctly matched ?

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

Answer: C

Explanation:

The correct matches are:

1. Ansupa Lake - Odisha
2. Tampara Lake - Odisha
3. Bela Sagar Lake - Uttar pradesh

45. Consider the following statements about Syngas:

1. Syngas refers to a mixture of oxygen, carbon monoxide, carbon dioxide and hydrogen.
2. Syngas is also used as a starting point for the production of synthetic petroleum, which can be used as a lubricant or fuel.

Which of the above statement(s) is/are correct?

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

Answer: b.

Explanation:

Statement 1 is incorrect:

- The term "syngas" refers to a mixture of carbon monoxide, carbon dioxide and hydrogen.
- Gasification of a carbon-containing fuel to a gaseous product with some heating value produces syngas. Gasification of coal emissions, waste emissions to energy gasification and steam reforming of coke are all instances of syngas generation.

Statement 2 is correct:

- Syngas gets its name from its usage as a catalyst in the production of synthetic natural gas, as well as ammonia and methanol. Synthesis gas, or syngas, is a gas that can be used to make other compounds.
- Syngas is also used as a starting point for the production of synthetic petroleum, which can be used as a lubricant or fuel.
- Natural gas has a 50% energy density, while syngas has 50%. It is a fuel source that cannot be burned directly.

46. With reference to ECOLEX which was in the news, which of the following is not correct?

- (a) It is a joint service of the IUCN, FAO and UNEP.
- (b) It provides environmental law information.
- (c) This is a simple-to-use information service available to users of developing countries.
- (d) The resulting combined information resource on environmental law is the world's largest.

Answer: c.

Explanation:

- It is a joint service of the IUCN, FAO and UNEP that provides environmental law information. It is the most comprehensive source of environmental law information available. This is a simple-to-use information service available to users worldwide.
- The ECOLEX database contains information on international treaties, international soft law and other non-binding policy and technical guidance documents, as well as national legislation, judicial decisions and legal and policy literature.
- FAO, IUCN and UNEP signed an agreement in 2001 to integrate their data into ECOLEX. The resulting combined information resource on environmental law is the world's largest. It is a goldmine of information not only for legal professionals, researchers and students, but also for policymakers and members of civil society worldwide and at all levels.

47. With reference to the “Lifestyle for the Environment (LiFE) Movement” , consider the following statements:

1. India proposed the LiFE concept at the 27th United Nations Climate Change Conference of the Parties (COP27) in Glasgow in 2021.
2. The concept advocates an ecologically conscientious lifestyle that emphasises "mindful and deliberate use" rather than "mindless and wasteful consumption."

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

Answer: b

Explanation:

- India proposed the LiFE concept to the United Nations Climate Change Conference of the Parties (COP26) in Glasgow in 2021.
- The concept advocates an ecologically conscientious lifestyle that emphasises "mindful and deliberate use" rather than "mindless and wasteful consumption."
- The Mission will replace the present "use-and-dispose" economy ruled by thoughtless and harmful consumerism with a circular economy regulated by conscious and purposeful consumption.

48. Consider the following in respect of ‘kushiyara river ’:

1. The Kushiyara River is a tributary of the Manas River, which rises in the Assam highlands and passes through nagaland and manipur.
2. The river swings west at Beel Pond (Pukhuri Beel) and runs past the settlement of Balaganj Bazar.

Which of the above statements is/are correct?

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

Answer: b

Explanation:

- The Kushiyara River is a tributary of the Barak River, which starts in Assam's uplands and flows through it to Bangladesh.
- The Surma-Meghna River System includes the Barak River, which originates in Manipur.

- The accord will assist southern Assam in India and the Sylhet region in Bangladesh.
- The river runs westward at the village of Balaganj Bazar in Balaganj Upazila, then southwestward past the villages of Hamjpur, Abdullpur, and Manumukh at Beel Pond (Pukhuri Beel).
- After being joined from the south by the Manu River, the river travels northwest via the settlements of Aorangapur, Tajpur, and Pilgaon, where it is joined by the minor Itakhola River and heads west.

49. Which of the following statements is/are correct regarding ozone?

1. Ozone is an odourless, colourless gas made up of three oxygen atoms.
2. Ozone is only formed in Stratosphere.
3. VOCs are found to contribute indirectly to respiratory and other ozone-related problems.

Select the correct answer using the codes given below:

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

Answer: c.

Explanation:

- Ozone is an odourless, colourless gas made up of three oxygen atoms. Ozone occurs in both the Earth's upper and lower atmospheres.
- Ozone is naturally formed in the stratosphere when highly powerful sun radiation breaks down oxygen molecules - O₂ - and causes the two oxygen atoms to split apart in a process known as photolysis. When a liberated atom collides with another O₂, they combine to make ozone O₃. Ozone, which is very plentiful in the stratosphere, warms this layer by absorbing energy from the Sun's incoming UV light.
- Ozone is formed in the Earth's lower atmosphere, near the ground, when pollutants emitted by automobiles, power plants, industrial boilers, refineries and chemical plants react chemically in the presence of sunlight. Ground-level ozone is carcinogenic to humans.
- When sunlight reacts with nitrogen oxide and at least one volatile organic compound (VOC) in the atmosphere, photochemical smog is formed. VOCs are released into the atmosphere by paints, gasoline and a variety of cleaning solvents.

50. Which of the following statements is/are correct regarding interactions between species:

1. Amensalism is a negative relationship between two species in which one species hurts or restricts the other without being negatively affected or damaged by the other's presence.

2. Antibiosis is an example of commensalism in which one organism secretes a chemical that kills the other while benefiting or harming the organism that secretes the chemical.

Select the correct answer using the codes given below:

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

Answer: a

Explanation:

- Amensalism is a negative relationship between two species in which one species hurts or restricts the other without being negatively affected or damaged by the other's presence. Antibiotic-secreting organisms and the species that are inhibited by antibiotics are both examples of amensalism.
- Antibiosis is an example of amensalism in which one organism secretes a chemical that kills the other while benefiting or harming the organism that secretes the chemical. The bread mould Penicillin and black walnut trees are two examples of antibiosis amensalism.
- Penicillium, or bread mould, exhibited bactericidal capabilities due to penicillin production, which is responsible for penicillin's antibacterial action. Bacteria are killed, while Penicillium (the fungus) is unharmed by bacteria.
- Similarly, walnut trees release a substance called juglone, which prevents grass from growing in its vicinity while leaving walnut trees unharmed.



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51. With reference to the Pala dynasty and its association with Buddhism, consider the following statements:

1. The Palas ruled over parts of the Indian subcontinent from the 8th to the 12th centuries CE.
2. Under Pala rule, renowned Buddhist universities and educational centers were established, such as the Vikramashila University in present-day Bihar.
3. The Palas primarily patronized Theravada Buddhism and discouraged the spread of Mahayana teachings.

Which of the statements given above is/are correct?

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

Answer: b

Explanation:

- Statement 1 is correct. The Pala dynasty ruled from 8th century to 12th century CE in the regions comprising Bihar and Bengal.
- Statement 2 is correct. Under Pala rule, renowned Buddhist universities and educational centers were established, such as the Vikramashila University in present-day Bihar. These institutions attracted scholars from different parts of Asia and became centers of learning and intellectual exchange for Buddhist philosophy, logic, and other disciplines.
- Statement 3 is Incorrect. The Palas primarily patronized Mahayana Buddhism, one of the major branches of Buddhism. They actively promoted Mahayana teachings and practices, contributing to the growth and expansion of this school of thought within their dominions.

Therefore, the correct answer is (b) 1 and 2 only.

52. Which of the following statements is/are correct about the main differences between the Nagara and Dravidian temple architecture styles?

1. The idea of numerous shikharas rising together in a cluster, which was popular in North India, was not well received in South India.
2. The vimana, or main temple tower, in the Dravida style is shaped like a stepped pyramid that rises mathematically rather than the bending shikhara of North India.
3. Enclosures around temples and Gopurams were the most notable elements of North Indian temples.

Select the correct answer using the codes given below:

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

ANSWER: a

EXPLANATION:

The following are the main differences between the Nagara and Dravidian temple architecture styles:

- Northern India is dominated by Nagara Style, whereas Southern India is dominated by Dravida Style.
- Subsidiary shrines are either incorporated into the main temple tower or situated as separate, little pyramid-like structures near the main temple in the Dravida style. The idea of numerous shikharas rising together in a cluster, which was popular in North India, was not well received in South India. **Statement 1 is correct.**
- The vimana, or main temple tower, in the Dravida style is shaped like a stepped pyramid that rises mathematically rather than the bending

shikhara of North India. This is analogous to the amlak and kalasha of North Indian temples, which are usually formed like a tiny stupika or an octagonal cupola. **Statement 2 is correct.**

- The Dravida temple, unlike the Nagara temple, is surrounded behind a compound wall. In the Dravida design, it is also usual to have a large water reservoir, or temple tank, enclosed within the complex.
- In addition, the sikhara remained the most prominent component in north Indian temples, while the entryway was generally plain. Enclosures around temples and Gopurams were the most notable elements of South Indian temples (huge gateways). **Statement 3 is not correct.**

53. With reference to the ancient Indus Valley Civilization, consider the following statements:

1. Mohenjo-daro was the largest and most advanced cities of the Indus Valley Civilization.
2. Mohenjo-daro had an efficient urban planning system, featuring well-organized streets, a sophisticated drainage system, and multi-story buildings.
3. At Lothal, MohenjoDaro and Harappa, religious symbols such as swastika seals (both small and large types) can be found.

Which of the statements given above is/are correct?

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

Answer:c

Explanation:

- Statement 1 is incorrect. While Mohenjo-daro was indeed one of the prominent cities of the Indus Valley Civilization, it is not accurate to describe it as one of the largest cities. Other cities like Harappa had a larger size.
- Statement 2 is correct. Mohenjo-daro had a well-developed urban planning system. The city featured grid-like streets, well-constructed brick houses with multiple stories, and an advanced drainage system. The presence of these features indicates a high level of urban sophistication and planning.
- Statement 3 is also correct. Steatite, a soft stone found in the river beds, was although the most common material used to make seals, however agate, chert, copper, faience and terracotta seals have also been found. At Lothal, MohenjoDaro, and Harappa, religious symbols such as swastika seals (both small and large types) can be found. **Statement 1 is correct.**

Therefore, the correct answer is (c) 2 and 3 only.

54. Consider the following pairs:

Folk Dance – State

1. Bhangra – Punjab
2. Garba – Gujarat
3. Kathakali – Andhra Pradesh
4. Karagattam – Tamil Nadu

How many pairs given above are correctly matched?

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

Answer: c

Explanation:**State****Folk dances****Andhra Pradesh**

Bhamakalpam and Kolattam

Arunachal Pradesh

Wancho

Assam

Bihu, Naga dance

Bihar

Jata-jatin

Chhattisgarh

Gaur Maria, Kapalik

Gujarat

Garba, Dandiya Raas and Bhavai

Goa

Tarangamel, Koli

Haryana

Jhumar, Phag

Himachal Pradesh

Jhora, Dhaman

Jammu & Kashmir

Kud Dandi Nach

Jharkhand

Agni, Jhumar

Karnataka

Yakshagana, Karga

Kerala

Ottam Thullal

Maharashtra

Lavani, Koli

Madhya Pradesh

Jawara, Matki

ManipurThang Ta, Lai Haraoba, Pung
Cholom**Meghalaya**

Nongkrem

Mizoram

Zangtalam, Chailam

Nagaland

Bamboo Dance, Rangma

Odisha	Savari, Ghumara
Punjab	Bhangra, Giddha
Rajasthan	Ghumar, Kalbelia
Tamil Nadu	Kumi, Kolattam, Kavadi
UP	Nautanki, Raslila
Uttarakhand	Garhwali, Kumayuni

55. With reference to Pithora painting, consider the following statements:

1. Pithora painting is a traditional folk art form originated in the state of Odisha, India.
2. Pithora paintings primarily depict mythological stories and tribal rituals.

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

Answer: d

Explanation:

Pithora painting is a traditional mural art form that is practiced by the Rathwa community in Gujarat and Madhya Pradesh, particularly in the regions of Chhota Udaipur and Jhabua.

Pithora paintings are known for their vibrant and intricate designs. They primarily depict ritualistic and mythological themes, along with scenes of everyday life in the community. These paintings are considered auspicious and are often done on the walls of houses during religious ceremonies and festivals.

Therefore, both statements 1 and 2 are incorrect, and the correct answer is (d) Neither 1 nor 2.

56. What is the purpose of the "VIRAASAT" project?

- (a) Promoting traditional handwoven saris
- (b) Preserving Indian cultural heritage
- (c) Supporting the handloom industry
- (d) All of the above

Answer: d

Explanation: The purpose of the "VIRAASAT" project encompasses multiple objectives related to traditional handwoven saris in India.

- "Promoting traditional handwoven saris" is correct because the project aims to showcase and celebrate the beauty, craftsmanship, and diversity of handwoven saris from different regions of India. By exhibiting these saris, the project promotes their aesthetic value and cultural significance.
- The project seeks to highlight the rich cultural heritage associated with handloom textiles and emphasizes the importance of preserving and continuing traditional weaving techniques, motifs, and designs. By showcasing these saris, the project aims to create awareness about the cultural legacy they represent.
- The project aims to create awareness about the handloom industry and the skilled artisans involved in creating handwoven saris. By providing a platform for weavers to showcase their skills and connect with a wider audience, the project supports the handloom industry and helps sustain the livelihoods of artisans.

57. Consider the following statements:

1. Swami Dayanand Saraswathi was the first to give the call for Swaraj as "India for Indians", a call later taken up by Lokmanya Tilak
2. He was against the caste system and the practice of untouchability
3. He advocated for the use of Sanskrit language as a medium of instruction in schools.

Which of the statements given above is/are correct?

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

Answer: d

Explanation:

- Statement 1 is correct: Swami Dayanand Saraswathi was an Indian philosopher, social leader and founder of the Arya Samaj. He was the first to give the call for Swaraj as "India for Indians" in 1876, a call later taken up by Lokmanya Tilak
- Statement 2 is Incorrect: While Dayanand did not fully oppose the institution of caste itself, he advocated for significant reform within it. Citing the Vedas, he claimed that caste is not supposed to be hereditary but rather on the basis of an individual's talents and disposition. • He was against the practice of untouchability
- Statement 3 is correct. He introduced a complete overhaul of the education system and is often considered as one of the visionaries of modern India. He advocated for the use of Sanskrit language as a medium of instruction in schools.

58. With reference to ancient Indian port cities, which of the following port is located in present day Kerala?

- (a) Arikamedu
- (b) Muziris

(c)Kaveripattinam

(d)Bharuch

Ans: b

Exp:

Muziris Port

- Muziris, an ancient port city in what is now the Indian state of Kerala, was one of the world's most important commercial ports about 2,000 years ago.
- The Muziris port, which existed in the first century BC, had an important role in connecting the region with the Persians, Phoenicians, Assyrians, Greeks, Egyptians and the Roman Empire. While spices, particularly black pepper, were the most popular items exported from Muziris, other items included semi-precious stones, diamonds, ivory and pearls.

Poompuhar Port

- Poompuhar, also known as Puhar, is thought to be the Chozha Empire's port town. The ancient port city of Kaveripoompattinam (or Kaveripattinam) was reputedly located in the mouth of the Kaveri River in 500 AD. It was located in the modern Nagapattinam district of Tamil Nadu.

Arikamedu Port

- In ancient texts, Arikamedu, which is now part of India's union territory of Puducherry, is referred to as the port of Podouke.
- Arikamedu is thought to have been an active commercial port of the region with the Roman Empire as early as the second century BC, as evidenced by allusions in the Periplus Maris Erythema and Tamil songs of the Sangam period. Many people believe Arikamedu was a Chola port focussed on bead production and the only port city in the region with Roman relations.

Bharuch Port

- Bharuch was a famous port in the Indian subcontinent and one of the most important cosmopolitan cities in the world around 2,000 years ago. Bharuch, which is now part of Gujarat and is located at the mouth of the Narmada River, was also known to merchants from all over the world as Bharukaccha and Barygaza. Arabs, Greeks and Romans, as well as Africans, Chinese and Egyptians, had established trading links with Bharuch.

Tamralipta

- Tamralipta was located in Midnapur, West Bengal, in the present-day town of Tamluk. It gets its name from tamra, or copper, which was mined nearby at Ghatsila in Bihar's Singhbhum region and exported through this port.
- Ships sailed down the shores of Bengal and Myanmar to the Malaya Peninsula, Indo-China, and beyond from here, which is located on the banks of the Rupnarayan river. The port of Tamralipti served as a crossroads for sailors, traders and missionaries from old east coast nations.
- The harbour town of Tamralipti flourished from the third century BC until the eighth century AD, according to literary and archaeological evidence.

59. Consider the following statements:

1. The Portuguese were the first Europeans to establish trading posts in India.
2. The Dutch established their dominance in India by defeating the Portuguese in the Battle of Colachel.
3. The British East India Company gained control over Bengal after the Battle of Plassey.

Which of the statements given above is/are correct?

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

(d) 1 and 3 only

Answer: d

Explanation:

- Statement 1 is correct. The Portuguese were indeed the first Europeans to establish trading posts in India. They arrived in the late 15th century and set up colonies and trading outposts along the western coast of India, including Goa and Mumbai.
- Statement 2 is incorrect. The Dutch did establish their presence in India, but their dominance was not achieved by defeating the Portuguese in the Battle of Colachel. Instead, the Battle of Colachel was fought between the Dutch East India Company and the Kingdom of Travancore, resulting in a victory for the latter and weakening Dutch influence in the region.
- Statement 3 is correct. The British East India Company did gain control over Bengal after the Battle of Plassey in 1757. The battle was fought between the British East India Company and the Nawab of Bengal, resulting in a decisive victory for the British and paving the way for their increased influence and control over large parts of India.

Therefore, the correct answer is (d) 1 and 3 only.

60. Consider the following statements about the 1813 Charter Act:

1. The Company's monopolistic trade practices ended.
2. The Board of Control's powers have been reduced even more.
3. Christian missionaries were allowed to travel to India and promote their religious beliefs.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 and 3 only

c. 1 and 3 only

d. 1, 2 and 3

Answer: c.

Explanation:

The Charter Act of 1813 was pushed through by the corporate community in England. A dismantling of the Corporation's monopoly on Trade has developed in India as a result of a cooperative spirit. Napoleon's Continental System and laissez-faire policies resulted in the closure of European Britain's ports. The year 1813 marked a turning point in history. The Act was enacted to address the following issues:

- The Company's monopolistic trade practices ended. **Statement 1 is correct.**
- Although the Company's presence in India has ended, China's and the United States' trading has continued. Tea is bought and sold.
- Even if it constituted a threat to the country's sovereignty, the corporation was meant to keep custody of the lands and earnings from the resources for another 20 years.
- The Board of Control's powers have been expanded even more. **Statement 2 is not correct.**
- Madras, Bombay and Calcutta were among the councils' norms and regulations. It is now up to you to present it before the judge.
- Separate accounts for company transactions as well as territorial revenues must be maintained. The Effects of Superintendence and Management on the Environment. The Board of Control was not only extended, but also dramatically defined.

Christian missionaries were allowed to travel to India and promote their religious beliefs. **Statement 3 is correct.**

61. Consider the following statements about the gig economy:

1. Employers did not prefer their employees to work from home, as it led to increased overhead costs as well as to hire skilled services.
2. Independent contractors, online platform workers, contract firm workers, on-call workers, and temporary workers are all examples of gig workers.
3. A gig worker's job contract is unique as it is typically longer and more focused on the task or job assigned.

Which of the above statement(s) is/are correct?

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

Answer: b.**Explanation:**

- The nature of work has evolved in response to technological advancements, the evolution of new economic activities, organisational structure innovation, and evolving business models.
- Apart from established forces, emerging forces have created enormous opportunities for consumers and service providers to interact in novel ways.
- Due to the fact that digital technology enables two-sided markets, e-commerce and online retailing platforms such as Amazon, Flipkart, Ola, Uber, Urban Clap, Zomato, and Swiggy have emerged.
- Employers also preferred their employees to work from home, reducing staff strength and engaging freelancers or outsourcing tasks to reduce overhead costs as well as to hire skilled services.
- Independent contractors, online platform workers, contract firm workers, on-call workers, and temporary workers are all examples of gig workers. Gig workers sign formal agreements with on-demand companies in order to provide services to the companies' clients.
- The benefit of the gig economy is that it provides both service seekers and service providers with flexibility in their employer-employee relationships.
- A gig worker's job contract is unique; it is typically shorter and more focused on the task or job assigned. Payment for work is more akin to a piece rate, negotiable, and may be in the form of a wage or partly as profit/reward than a fixed salary.
- Until recently, gig or platform workers lacked basic rights and social security protections, owing to the fact that they were not classified as workers or employees under the country's labour laws, and thus were not entitled to legal protections under labour laws.
- For the first time, these workers have been brought within the ambit of the newly enacted Code on Social Security 2020, which categorises them exclusively as unorganised workers for the purpose of providing social security benefits.

62. Consider the following in respect of 'NISAR MISSION':

1. It is expected to be launched in January 2024 from Satish Dhawan Space Centre into a geo-stationary orbit.
2. It employs two separate radar frequencies to detect surface changes that are smaller than a millimeter in size.

Which of the above statements is/are correct?

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

Answer: d

Explanation:

- NISAR, an SUV-sized satellite that NASA and ISRO are constructing, will be able to detect movements of the planet's surface.
- Using two distinct radar frequencies (L-band and S-band), NISAR will be the first radar of its kind in orbit to methodically scan Earth. It will monitor changes in our planet's surface that are smaller than a centimetre across.
- 'NISAR' stands for the collaboration between NASA and ISRO, where SAR refers to Synthetic Aperture Radar. This technology enables high-precision imaging, which can measure changes in the Earth's surface regardless of weather conditions, as it can penetrate through clouds and darkness.
- The satellite will be sent into a near-polar orbit in 2024 from the Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh.

63. Consider the following statements about factors that forms part of net natural capital consumption:

1. resource depletion
2. environmental damage
3. protective and restorative environmental actions

Which of the above statement(s) is/are correct?

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

Answer: d

Explanation:

Green GDP, or GDP, is a measure of economic growth that takes into account the environmental effects of that expansion. To calculate green GDP, net natural capital consumption must be subtracted from tradition, which includes resource depletion, environmental damage and protective and restorative environmental actions.

64. Consider the following regarding Marine Products Export Development Authority (MPEDA)

1. It is a non-statutory body under the Ministry of Commerce and Industry in order to promote the export of marine products.
2. It registers seafood processing units, fishing vessels, pre-processing centres etc.
3. It was implementing the National Residue Control Plan (NRCP), to monitor the presence of residues from substances such as Antibacterial/Veterinary Medicinal Products, among others, in marine products intended for export to the European Union.
4. India is the world's 2nd largest fish producer.

Which of the following is/are correct?

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

Answer: d

Explanation:

- Marine Products Export Development Authority (MPEDA) is a statutory body under the Ministry of Commerce and Industry in order to promote the export of marine products.
- The Act empowers MPEDA to regulate exports of marine products and take all measures required for ensuring sustained, quality seafood exports from the country.
- The erstwhile Marine Products Export Promotion Council established by the Government of India in September 1961 was merged into MPEDA on 24th August 1972. MPEDA is given the mandate to promote the marine products industry with special reference to exports from the country.

Major Functions of MPEDA

- Registration of infrastructural facilities for seafood export trade.

- Collection and dissemination of trade information.
- Promotion of Indian marine products in overseas markets.
- Implementation of schemes vital to the industry by extending assistance for infrastructure development for better preservation and modernized processing following quality regime.
- Promotion of aquaculture for augmenting export production through hatchery development, new farm development, diversification of species and up gradation of technology
- Promotion of deep-sea fishing projects through test fishing, joint ventures and up gradation & installation of equipments to increase the efficiency of fishing.
- Market promotional activities and publicity.
- To carry out inspection of marine products, its raw material, fixing standards and specifications, training, regulating as well as to take all necessary steps for maintaining the quality of seafood that are marketed overseas.
- Impart trainings to fishermen, fish processing workers, aquaculture farmers and other stake holders in the respective fields related to fisheries; promotion of modernization of fishing harbours.
- India is the world's second-largest fish producer.

65. Consider the following regarding Global Innovation Index (GII)

1. It was released by World Intellectual Property Organisation (WIPO)
2. GII parameters include institutions, human capital and research, infrastructure, market sophistication, business sophistication, knowledge and technology outputs and create outputs.
3. India still remains 1st rank in the ICT services exports indicator.

Which of the following are correct?

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

Answer: d

Explanation:

- The GII, launched in 2007, provides an annual assessment of global innovation and ranks countries based on their innovative performance. WIPO, in partnership with the Portulans Institute, various corporate partners (such as the Confederation of Indian Industry), and Academic Network Members, publishes the report.

- WIPO joined the partnership in 2011. The GII 2022 theme was "What is the future of innovation-driven growth?" and it evaluated the innovation performance of 132 countries through two sub-indices: the Innovation Input Sub-Index and the Innovation Output Sub-Index (refer to the image).
- Switzerland, the USA, Sweden, the UK, and the Netherlands secured the top five positions in the GII 2022 rankings. India, which rose 41 places since 2015, is the highest-ranked country in the Central and Southern Asia region and the Lower-middle-income group. Additionally, India maintained its first position in the ICT services exports indicator within the GII.
- The report also highlighted India's strong performance in other indicators, such as Venture Capital Recipients' Value (6th), Finance for Startups and Scaleups (8th), Graduates in Science and Engineering (11th), Labor Productivity Growth (12th), and Domestic Industry Diversification (14th).

66. With reference to UN Economic and Social Council ECOSOC, consider the following statements:

1. It is the central platform for fostering debate and innovative thinking, forging consensus on ways forward, and coordinating efforts to achieve internationally agreed goals.
2. It has 55 member countries and the members are elected by the general assembly
3. India was elected to the UN ECOSOC for the term 2022-24

Which of the statements given above is/are correct?

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

Ans : b

Exp :

- The Economic and Social Council is at the heart of the United Nations system to advance the three dimensions of sustainable development – economic, social and environmental. It is the central platform for fostering debate and innovative thinking, forging consensus on ways forward, and coordinating efforts to achieve internationally agreed goals. It is also responsible for the follow-up to major UN conferences and summits.
- The UN Charter established ECOSOC in 1945 as one of the six main organs of the United Nations.
- It is the principal body for coordination, policy review, policy dialogue and recommendations on economic, social and environmental issues, as well as implementation of internationally agreed development goals.
- The 54-member countries. Members are elected by the General Assembly.

67. Consider the following statements regarding United Nations Human Rights Council (UNHRC):

1. The Human Rights Council is an inter-governmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the globe and for addressing situations of human rights violations and make recommendations on them.
2. It is made up of 47 States. It does not report directly to the General Assembly. Its decisions, resolutions, and recommendations are not legally binding.
3. The Human Rights Council replaced the former United Nations Commission on Human Rights.

Which of the statements given above is/are correct?

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

Ans : d

Exp :

The Human Rights Council is an inter-governmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the globe and for addressing situations of human rights violations and make recommendations on them. It has the ability to discuss all thematic human rights issues and situations that require its attention throughout the year. It meets at the UN Office at Geneva.

The Council is made up of 47 United Nations Member States which are elected by the UN General Assembly. The Human Rights Council replaced the former United Nations Commission on Human Rights.

- The Council was created by the United Nations General Assembly in 2006. It replaced the former United Nations Commission on Human Rights.
- The Office of the High Commissioner for Human Rights (OHCHR) serves as the Secretariat of the Human Rights Council.
- OHCHR is headquartered in Geneva, Switzerland.

It is made up of 47 United Nations Member States which are elected by the UN General Assembly (UNGA). Members of the Council serve for a period of three years and are not eligible for immediate re-election after serving two consecutive terms.

68. Consider the following regarding National Pharmaceutical Pricing Authority (NPPA)

1. NPPA comes under the Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers and it was constituted in 1997.
2. It renders advice to the Central Government on changes/revisions in the drug policy.

Which Of the following is/are correct?

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

Answer: c

Explanation:

The National Pharmaceutical Pricing Authority was set up as an attached office of the Department of Chemicals and Petrochemicals (now Department of Pharmaceuticals since July, 2008) on 29th August 1997.

Functions of National Pharmaceutical Pricing Authority (NPPA)

- To implement and enforce the provisions of the Drugs Price Control Order (DPCO), 1995/2013 in accordance with the powers delegated to it.
- To undertake and/or sponsor relevant studies in respect of pricing of drugs/formulations.
- To monitor the availability of drugs, identify shortages, if any, and to take remedial steps.
- To collect/maintain data on production, exports and imports, market share of individual companies, profitability of companies etc. for bulk drugs and formulations.
- To deal with all legal matters arising out of the decisions of the Authority.
- To render advice to the Central Government on changes/revisions in the drug policy.
- To render assistance to the Central Government in the parliamentary matters relating to the drug pricing.

69. Consider the following regarding National Logistics Policy

1. It will be implemented by the Empowered Group of Secretaries (EGoS) which was created under the PM Gati Shakti.
2. Four pillars of the NLP: Unified logistics interface platform, Integration of digital system, Ease of logistics and system improvement group.

Which of the following is/are correct?

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

Answer:c

Explanation:

- The National Logistics policy is a comprehensive effort to address cost and inefficiency by issues lying down an overarching interdisciplinary, cross-sectoral, and multi-jurisdictional framework for the developing entire logistics ecosystem. The goal of this policy is to make the logistics industry more efficient and lower its costs. The strategy aims to boost economic growth, provide employment opportunities, and make Indian products more competitive in the global market.
- It will be implemented by the Empowered Group of Secretaries (EGoS) which was created under the PM Gati Shakti.
- It seeks to reduce the logistics cost from 16 per cent of Gross Domestic Product (GDP) to a global average of 8 per cent by 2030.

Four pillars of NLP include:

- Integration of Digital System (IDS): There will be digital integration of different systems of seven various departments (like road transport, railways, aviation, commerce ministries and foreign trade)

- Unified Logistics Interface Platform (ULIP): This ensures shorter and smoother cargo movement and enables the exchange of information confidentially on a real-time basis. This National Industrial Corridor Development Corporation (NICDC) Logistics Data Bank Project has been leveraged.
- Ease of Logistics (ELOG): will enable and ensure the ease of logistics business through transparency and accessibility
- System Improvement Group: will monitor all logistics-related projects regularly

70. With reference to India, Gujrat, Kaliwala, Mewara and Panwara refers to

- (a) Ancient cities.
- (b) Exotic Rivers.
- (c) Tribal clans.
- (d) Military units.

Answer: c

Explanation:

- The Hakki Pikki tribe is a semi-nomadic tribe that lives in forest areas of west and south India and has traditionally engaged in bird capturing and hunting.
- It is a Scheduled Tribe of Karnataka, and its ancestors are supposed to be related to the renowned Ranaprataap Singh.
- The Hakki Pikki tribe is thought to have originated in Gujarat and Rajasthan before migrating to south India through Andhra Pradesh.
- The tribe is organised into four clans, which may be associated with castes in traditional Hindu culture. The four clans are Gujaratia, Panwar, Kaliwala, and Mewaras.

71. 'PRAAPTI portal was launched by

- (a) Ministry of coal
- (b) Ministry of Petroleum
- (c) Ministry of Power
- (d) Ministry of New and renewable energy

Answer: c

Explanation:

- 'PRAAPTI portal was launched by the Ministry of Power.
- PRAAPTI App and web portal has been developed to bring transparency in power purchase transactions between Generators and Discoms.
- The app will also allow users to know the details related to the payments made by the Discoms to the power generation company and when they were made.
- PRAAPTI will also enable the consumers to evaluate financial performance of their Discoms in terms of payments being made to the generation companies.

72.Consider the following statements:

1. The CIC was established by the Central Government in 2005, under the provisions of the Right to Information Act (2005).
2. It is a constitutional body
3. Chief Information Commissioner shall hold office for such term as prescribed by the Central Government or until they attain the age of 65 years.

Which of the statements given above is/are correct?

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

Ans : d**Exp :**

- The CIC was established by the Central Government in 2005, under the provisions of the Right to Information Act (2005).
- It is not a constitutional body.
- Chief Information Commissioner shall hold office for such term as prescribed by the Central Government or until they attain the age of 65 years.
- It consists of a Chief Information Commissioner and not more than ten Information Commissioners.

73. With reference to Anti Defection Law , consider in following statements:

1. The 52nd amendment 1985 added Tenth Schedule which laid down the process by which legislators may be disqualified on grounds of defection.
2. The grounds for disqualification of the Member of Parliament or State Legislature belonging to a political party is deemed to have defected if he either voluntarily resigns or gives up the membership of his political party, or he disobeys the directives of the party leadership on a vote or abstains from voting without taking prior permission.
3. A party could be merged into another if at least one-third of its party legislators voted for the merger.

Which of the statements given above is/are correct?

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

Ans : b

Exp :

- The 52nd amendment 1985 added Tenth Schedule which laid down the process by which legislators may be disqualified on grounds of defection.

GROUND FOR DISQUALIFICATION

- Member of Parliament or State Legislature belonging to a political party is deemed to have defected if he either voluntarily resigns or gives up the membership of his political party, or he disobeys the directives of the party leadership on a vote or abstains from voting without taking prior permission. However, he can seek permission of party before 15 days.
- An independent candidate joins the party after the election. (discriminatory viz a viz nominated member.
- A nominated member joins a party six months after becoming an MP/MLA.

EXCEPTIONS TO THE ANTI-DEFECTION LAW

- Any person elected as speaker or chairman could resign from his party, and rejoin the party if he demitted that post, as practiced in Britain.

- A party could be merged into another if at least two-thirds of its party legislators voted for the merger

74. Which of the following statements is/are incorrect about The Coradia iLint, the world's first hydrogen fuel cell-powered train?

1. It has been introduced in China.
2. Hydrogen trains are fitted with fuel cells that generate electricity from a mixture of hydrogen and oxygen, leaving only oxygen as emissions.
3. The Coradia iLint trains can travel 10,000 kilometres on a single hydrogen tank.

Select the correct answer using the codes given below:

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

Answer: d

Explanation:

- The Coradia iLint, the world's first hydrogen fuel cell-powered train, has been introduced in Germany. Hydrogen trains are fitted with fuel cells that generate electricity from a mixture of hydrogen and oxygen, leaving only steam and water as emissions. On board the train, excess energy is stored in ion lithium batteries.
- The Coradia iLint trains can travel 1,000 kilometres on a single hydrogen tank, which is comparable to the range of diesel trains. Other countries, including the United Kingdom, the Netherlands, Denmark, Norway, Italy and Canada, are investigating hydrogen trains. The government of France has stated that the first hydrogen train will be on the tracks by 2022.

75. Consider the following pairs:

1. Yankti kuti valley - Uttarakhand
2. Nubra Valley - assam
3. Ketti Valley - ladakh

Which of the pairs given above is/are correctly matched ?

- (a) 1 only

- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) None of the above

Answer: a

Explanation:

The correct pairs are

1. Yankti kuti valley - Uttarakhand
2. Nubra Valley - Ladakh
3. Ketti Valley - Tamil nadu

76. Consider the following pairs about butterfly species and their respective location in India:

1. Southern Birdwing: Karnataka
2. Common Peacock: Uttarakhand
3. Blue Mormon: Maharashtra

Which of the pairs given above is/are correctly matched?

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

Answer: d

Explanation:

- In India, the year 2019 has been a watershed moment for butterfly researchers. In January 2019, researchers at Sikkim University in Gangtok announced the reintroduction of the Small Wood brown butterfly species from Khangchendzonga National Park after a 120-year absence.
- Tamil Nadu is home to 32 endemic butterfly species. It has become the fifth Indian state, after Maharashtra, to bestow state emblem status on one of its colourful insects through the latest policy initiative.
- Maharashtra (Blue Mormon, which is endemic to India (South India) and Sri Lanka).

- Uttarakhand (Common peacock which is native to Asia and Australia and is also called Chinese Peacock Butterfly).
- Karnataka (Southern birdwing, a butterfly that is endemic to South India and is the largest butterfly in the country).
- Kerala (Malabar banded peacock) has designated one of its colourful insects as a state emblem.

77. With reference to QUAD , consider the 4th QUAD Leaders' Tokyo Summit 2022 following statements:

1. The Quad is a diplomatic network of four countries committed to supporting an open, stable and prosperous Indo-Pacific that is inclusive and resilient. It complements our other bilateral, regional and multilateral cooperation, including with ASEAN member states and Pacific partners.
2. It launched Quad Climate Change Adaptation and Mitigation Package (Q-CHAMP) with mitigation and adaptation as its two themes and established Quad Partnership on Humanitarian Assistance and Disaster Relief (HADR) in the Indo-Pacific to strengthen collaboration and effectively respond to disasters in the region.
3. Quad nations agreed to create an Earth observation based monitoring and sustainable development framework to combat illegal, unregulated and unprotected (IUU) fishing.

Which of the statements given above is/are correct?

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

Ans : a

Exp :

- The 4th QUAD Leaders' Tokyo Summit 2022 took place in Tokyo , Japan.
- The QUAD countries include India , Japan , Australia and USA.
- Launched **Quad Climate Change Adaptation and Mitigation Package (Q-CHAMP)**
- Established Quad Partnership on Humanitarian Assistance and Disaster Relief (HADR) in the Indo- Pacific for disaster response
- The first-ever Quad Cybersecurity Day for better protection from cyber threats
- To create an Earth observation based monitoring and sustainable development framework to combat illegal, unregulated and unprotected (IUU) fishing and a "Quad Satellite Data Portal" to aggregate links to respective national satellite data resources.

- To extend over 50 billion USD of infrastructure assistance and investment in the Indo-Pacific, over the next five years
- Strengthen the capacities of countries in need to cope with debt issues under the G20 Common Framework.
- Promotion of debt sustainability and transparency through Quad Debt Management Resource Portal.

78. With reference to '17th G20 summit concluded recently with the adoption of Bali declaration' mentioned in the news, which of the following statements is/are correct?

1. The Group of Twenty (G20) is the premier forum for international economic cooperation. It plays an important role in shaping and strengthening global architecture and governance on all major international economic issues.
2. India holds the Presidency of the G20 from 1 December 2022 to 30 November 2023. The theme of India's Presidency - "Vasudhaiva Kutumbakam" or "One Earth · One Family · One Future"

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

Ans : c

Exp :

- The Group of Twenty (G20) is the premier forum for international economic cooperation. It plays an important role in shaping and strengthening global architecture and governance on all major international economic issues.
- India holds the Presidency of the G20 from 1 December 2022 to 30 November 2023.
- The G20 was founded in 1999 after the Asian financial crisis as a forum for the Finance Ministers and Central Bank Governors to discuss global economic and financial issues
- The Group of Twenty (G20) comprises 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Türkiye, United Kingdom and United States)

States) and the European Union. The G20 members represent around 85% of the global GDP, over 75% of the global trade, and about two-thirds of the world population

- The G20 Presidency steers the G20 agenda for one year and hosts the Summit. The G20 consists of two parallel tracks: the Finance Track and the Sherpa Track. Finance Ministers and Central Bank Governors lead the Finance Track while Sherpas lead the Sherpa Track after Finance Track.
- In addition, there are Engagement Groups which bring together civil societies, parliamentarians, think tanks, women, youth, labour, businesses and researchers of the G20 countries.
- The Group does not have a permanent secretariat. The Presidency is supported by the Troika – previous, current and incoming Presidency. During India's Presidency, the troika will comprise Indonesia, India and Brazil, respectively.

79. With reference to , consider the following events :

1. Shimla Agreement
2. Lahore Declaration
3. Delhi Agreement

What is the correct chronological sequence of the above events ?

- (a) 1-2-3
- (b) 2-1-3
- (c) 3-2-1
- (d) 1-3-2

Ans : d

Exp :

The Shimla Agreement completed 50 years.

About Shimla Agreement

- It was signed on 2nd July 1972 between India and Pakistan.
- It laid a comprehensive blueprint for good neighborly relations between the countries.
- It was signed to reverse the consequences of the 1971 war.

Apart from Shimla agreement, Lahore Declaration (1999) reiterated, among other things, that the Kashmir

issue needed to be resolved bilaterally.

Delhi Agreement

The Delhi Agreement was a trilateral agreement signed between India, Pakistan and Bangladesh on 28 August 1973; and ratified only by India and Pakistan. It allowed the repatriation of prisoners of war and interned officials held in the three countries after the 1971 Bangladesh Liberation War.

Lahore Declaration (1999)

This agreement provides the framework for peaceful relations between the parties whereby all issues including the issue of Jammu and Kashmir would be resolved by peaceful means.

Towards this end, the parties agreed to strengthen dialogue processes, take immediate steps to reduce the risk of accidental or unauthorised use of nuclear weapons, to elaborate confidence building measures and to strengthen the regional organisation of SAARC.

79.Consider the following statements:

1. N.A. Palkhivala called the Preamble as the ‘identity card of the Constitution.’
2. The ingredients of the constitution includes Source of the constitution, Nature of Indian state , Objective and Date of its adoption
3. Preamble is neither a source nor a prohibition upon the powers of legislature. It is non-justiciable

Which of the statements given above is/are correct?

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

Ans : d

Exp:

- N.A. Palkhivala called the Preamble as the ‘identity card of the Constitution.’
- Source of the constitution - The people of India
- Nature of Indian state - Sovereign, Socialist, Secular, Democratic, Republic.
- Objectives - Justice, Liberty, Equality, Fraternity.
- Date of its adoption - November 26, 1949
- Preamble is neither a source nor a prohibition upon the powers of legislature.

- It is non-justiciable - provisions are not enforceable in courts of law

80. Consider the following pairs about butterfly species and their respective location in India:

1. Southern Birdwing: Karnataka
2. Common Peacock: Uttarakhand
3. Blue Mormon: Maharashtra

Which of the pairs given above is/are correctly matched?

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

Answer: d

Explanation:

- In India, the year 2019 has been a watershed moment for butterfly researchers. In January 2019, researchers at Sikkim University in Gangtok announced the reintroduction of the Small Wood brown butterfly species from Khangchendzonga National Park after a 120-year absence.
- Tamil Nadu is home to 32 endemic butterfly species. It has become the fifth Indian state, after Maharashtra, to bestow state emblem status on one of its colourful insects through the latest policy initiative.
- Maharashtra (Blue Mormon, which is endemic to India (South India) and Sri Lanka).
- Uttaranchal (Common peacock which is native to Asia and Australia and is also called Chinese Peacock Butterfly).
- Karnataka (Southern birdwing, a butterfly that is endemic to South India and is the largest butterfly in the country).
- Kerala (Malabar banded peacock) has designated one of its colourful insects as a state emblem.

81. Consider the following pairs of Tunnels in Jammu & Kashmir

1. Z-Morh Tunnel- Gagangir to Sonamarg.
2. Jawahar Tunnel - Qazigund and Baramulla.
3. Pir Panjal Railway Tunnel - Banihāl and Qazigund

Which of the pairs given above is/are correctly matched ?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) None of the above

Answer:a

Explanation:

- **The Z-Morh Tunnel:** It is a 20-kilometer-long tunnel on the Srinagar-Kargil-Leh highway that is currently under development.
- The 6.5-kilometer tunnel would connect Gagangir to Sonamarg in Kashmir.
- **Jawahar Tunnel:** It is also called Banihal Tunnel or Banihal Pass. The length of the tunnel is 2.85 km.
It is situated between Banihāl and Qazigund on NH 1A that has been renumbered NH 44.
- The tunnel facilitates round-the-year road connectivity between Srinagar and Jammu.
- **Pir Panjal Railway Tunnel:** At 11.2 kilometres in length, it is India's longest transportation railway tunnel.
- The tunnel connection, India's first wide gauge mountain railway, runs between Quazigund and Baramulla via the Pir Panjal mountain range.
- The tunnel portion is part of the Northern Railways' 202-kilometer Udhampur-Srinagar-Baramulla rail connection project.

82. Which of the following places comes in line with the Line of Actual Control :

1. Depsang plains.
2. Bolan pass.
3. Galwan Valley.
4. Kugrang River Valley.
5. Chang Chenmo River tributary.

Which of the statements given above is/are correct?

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

Ans : c

Exp:



83. The following statements are describing about which strait :

1. The strait which is linking Crimea and Russia , located in eastern Europe.
 2. It connects the Black Sea and the Sea of Azov.
 3. It is formerly known as the Cimmerian Bosphorus. It has also been called the Straits of Yenikale.
- (a) Kamchatka Strait
(b) Bering Strait
(c) Kerch Strait
(d) Long Strait

Ans : c

Exp:

- It is in Eastern Europe.
- It connects the Black Sea and the Sea of Azov, separating the Kerch Peninsula of Crimea in the west from the Taman Peninsula of Russia's Krasnodar Krai in the east.

- The most important harbor, the Crimean city of Kerch, gives its name to the strait, formerly known as the Cimmerian Bosphorus.
- It has also been called the Straits of Yenikale after the Yeni-Kale fortress in Kerch



84. Which of the following statements is/are correct regarding THE Indian Antarctic Act, 2022?

1. An Act to provide for the national measures for protecting the Antarctic environment and associated ecosystems.
2. It is to give effect to the Antarctic Treaty, the Convention on the Conservation of Antarctic Marine Living Resources.
3. No person in an Indian expedition shall enter or remain in Antarctica without a permit or the written authorisation of another Party to the Protocol.
4. No person shall introduce into any part of Antarctica any microscopic organism of a species which is not indigenous to Antarctica, except in accordance with a permit or the written authorisation of another Party to the Protocol.

Select the correct answer using the code given below :

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

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

Ans : d

Exp :

- An Act to provide for the national measures for protecting the Antarctic environment and associated ecosystems
It is to give effect to the Antarctic Treaty, the Convention on the Conservation of Antarctic Marine Living Resources and to the Protocol on Environmental Protection to the Antarctic Treaty
No person in an Indian expedition shall enter or remain in Antarctica without a permit or the written authorisation of another Party to the Protocol
- No person shall introduce into any part of Antarctica any microscopic organism of a species which is not indigenous to Antarctica, except in accordance with a permit or the written authorisation of another Party to the Protocol.
- The Convention on the Conservation of Antarctic Marine Living Resources was signed at Canberra on the 20th day of May, 1980, inter alia, for the protection and preservation of the Antarctic environment and, in particular, for the preservation and conservation of marine living resources in Antarctica. India ratified the Convention on 17th June, 1985 and is a member of the Commission for Conservation of Antarctic Marine Living Resources under that Convention. The Protocol on Environmental Protection to the Antarctic Treaty was signed at Madrid on 4th October, 1991
- India signed the Protocol on Environmental Protection to the Antarctic Treaty on 14th January, 1998. Antarctica lies south of 60° South Latitude, which is a natural reserve, devoted to peace and science and should not become the scene or object of any international discord.

85. With reference to ASEAN , consider the following statements:

1. Association of Southeast Asian Nations or ASEAN is an organization formed by the governments of Malaysia, Indonesia, the Philippines, Thailand, and Singapore in 1967 to promote economic growth, peace, security, social progress and cultural development in the Southeast Asian region.
2. The motto of ASEAN is “One Vision, One Identity, One Community” .
3. The Year 2022 was announced as India-ASEAN Friendship Year on account of 30th anniversary of India-ASEAN partnership.

Which of the statements given above is/are correct?

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

Ans : a

Exp :

- Association of Southeast Asian Nations or ASEAN is an organization formed by the governments of Malaysia, Indonesia, the Philippines, Thailand, and Singapore in 1967 to promote economic growth, peace, security, social progress and cultural development in the Southeast Asian region
- The motto of ASEAN is “One Vision, One Identity, One Community”
The Year 2022 was announced as India-ASEAN Friendship Year on account of 30th anniversary of India-ASEAN partnership
- The focus of the meeting was to review the progress of cooperation under all three pillars of Partnership—economic and socio-cultural, political-security, and also on taking steps for further implementation of ASEAN-India Plan of Action (2021-2025).

ASEAN

- Thailand (founding member) , The Philippines (founding member) , Malaysia (founding member) , Singapore (founding member) , Indonesia (founding member) , Brunei (joined in 1984) , Vietnam (joined in 1995) , Lao PDR (joined in 1997) , Myanmar (joined in 1997) , Cambodia (joined in 1999)

Observer States : Papua New Guinea and Timor Leste (East Timor)

ASEAN Headquarters

- The body is headquartered in Jakarta, Indonesia.
- Secretary-General: Dato Lim Jock Hoi
- Official Languages: Burmese, Filipino, Indonesian, Khmer, Lao, Malay, Mandarin, Tamil, Thai and Vietnamese
- Working Language: English

ASEAN+3 : ASEAN’s ten members, China, Japan, and South Korea.

ASEAN+6 : Association of Southeast Asian Nations (ASEAN) and six other countries in the Asia-Pacific region: Australia, the People's Republic of China ("China"), India, Japan, Korea and New Zealand.

East Asia Summit : ASEAN, Australia, China, India, Japan, New Zealand, Russia, South Korea, and the United States

ASEAN dialogue partners Australia China India Newzealand Russia US Canada EU Japan Republic of Korea UK

86 . Consider the following in respect of ‘ 22nd Meeting of the Council of Heads of State of the Shanghai Cooperation Organisation (SCO) took place in Samarkand, Uzbekistan’:

1. Varanasi, was declared as the SCO Tourism and Cultural Capital for 2022-2023 to promote the rich heritage and the tourism potential of SCO member states
2. Iran was accepted as a permanent member of the SCO.

Which of the above statements is/are correct?

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

Ans: c

Exp :

- 22nd Meeting of the Council of Heads of State of the Shanghai Cooperation Organisation (SCO) took place in Samarkand, Uzbekistan.
- Samarkand declaration was adopted.
- SCO Presidency was handed over to India and India will host the SCO 2023 summit.
- Varanasi, was declared as the SCO Tourism and Cultural Capital for 2022-2023 to promote the rich heritage and the tourism potential of SCO member states.
- Iran was accepted as a permanent member of the SCO.
- India emphasized the initiative to promote millets and address issues related to food security. India to take initiative for new SCO working group on traditional medicines

87. With reference to Maritime Rescue Coordination Centre (MRCC) , consider the following statements:

1. MRCC is part of international network under the UN's International Maritime Organisation to monitor the sea lanes.
2. The course was conducted under the aegis of Indian Technical and Economic Cooperation Programme (ITEC) for officers and sailors of Maritime Security Agencies from six friendly countries - Bangladesh, Seychelles, Sri Lanka, Mauritius, Myanmar and Maldives.
3. In India, the Coast Guard is the co-ordinating agency.

Which of the statements given above is/are correct?

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

Ans: a

Exp:

- Indian Coast Guard (ICG) conducted a one-week Maritime Rescue Coordination Centre (MRCC) operations & Search and Rescue (SAR) course in Mumbai
- MRCC is part of international network under the UN's International Maritime Organisation to monitor the sea lanes
- This primarily envisaging the Legal background domain of Maritime Search and Rescue, Planning and Coordination, Global Maritime Distress and Safety System, Lectures on Harmonisation of Aeronautical and Maritime SAR, satellite-aided SAR operations
- India and Sri Lanka have signed a MoU for the Bharat Electronics Ltd (BEL) to set up a state of the art Maritime Rescue Coordination Centre (MRCC) in Colombo
- The course was conducted under the aegis of Indian Technical and Economic Cooperation Programme (ITEC) for officers and sailors of Maritime Security Agencies from six friendly countries - Bangladesh, Seychelles, Sri Lanka, Mauritius, Myanmar and Maldives.
- In India, the Coast Guard is the co-ordinating agency

88. Which of the following statements is/are correct regarding weather conditions in mid-winter over the North-Western part of India?

1. The night temperature may be quite low, sometimes going below freezing point in Punjab and Rajasthan.
2. The snowfall in the nearby Himalayan ranges creates a cold wave situation.

3. The Peninsular region of India does have a well-defined cold weather season.

Select the correct answer using the codes given below:

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

Answer: b.

Explanation:

- Winter, the coldest season of the year, comes between autumn and spring. It is associated with plunging temperatures and icy weather, but its impact and timing change according to location. The farther an area lies from the equator, the colder temperatures it experiences.
- This season usually begins in late-November in northern India. Lowest temperatures are observed in Punjab and Rajasthan. December and January are the coldest months in the northern plain. The night temperature may be quite low, sometimes going below freezing point in Punjab and Rajasthan. **Statement 1 is correct.**
- There are three main reasons for the excessive cold in north India during this season:
 - States like Punjab, Haryana and Rajasthan being far away from the moderating influence of sea experience continental climate.
 - The snowfall in the nearby Himalayan ranges creates cold wave situation; and **Statement 2 is correct.**
 - Around February, the cold winds coming from the Caspian Sea and Turkmenistan bring a cold wave along with frost and fog over the northwestern parts of India.
- The Peninsular region of India, however, does not have any well-defined cold weather season. **Statement 3 is not correct.**

89. With reference to the JALDOOT app, consider the following statements:

1. The JALDOOT app was created in collaboration with the Ministry of Rural Development and Agriculture..
2. The app will function both online and offline. As a result, water levels may be measured even without internet access, and the data collected will be saved in a mobile device.

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

Answer: b

Explanation:

- The JALDOOT app was created in collaboration with the Ministry of Rural Development and Panchayati Raj.
- This app will be used across the country to record the water level of a village's selected 2-3 wells.
- The app will function both online and offline. So, water level may be taken even without internet access, and acquired data is kept in the mobile, and data is synchronised with the central server when the mobile enters the connectivity region.

90. With reference to the Commission for Air Quality Management , consider the following statements:

1. A legislative authority formed under Environment Act, 1986.
2. It was first constituted by an Ordinance in 2020.

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

Answer: b**Explanation:**

- A legislative organisation formed under the Commission for Air Quality Management in the National Capital Region and Adjacent Areas Act, 2021.
- An Ordinance was first passed in 2020.
- Led by a Chairperson with at least 15 years of expertise in the field of environment and pollution or 25 years of administrative experience.
- National Green Tribunal hears appeals of CAQM rulings, instructions, and so on.
- Developing and carrying out strategies to prevent and manage air pollution in the NCR.
- Conduct research and development through collaborating with technological institutes.

91. Consider the following statements regarding tribal revolts in India:

1. Tribal revolts in India were primarily driven by socio-economic factors and grievances related to land alienation, exploitation, and displacement.

2. Birsa Munda led the famous tribal revolt known as the Ulgulan or the Birsa Movement in the late 19th century.
3. The Santhal Rebellion, also known as the Santhal Hul, was a significant tribal uprising that took place in the mid-19th century.

Which of the statements given above is/are correct?

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

Answer: d

Explanation:

Statement 1 is correct. Tribal revolts in India were largely a response to the socio-economic conditions faced by the tribal communities. These revolts were triggered by issues such as loss of land, exploitation by moneylenders and landlords, displacement due to forest policies, and denial of tribal rights.

Statement 2 is correct. Birsa Munda was a prominent tribal leader and played a crucial role in the Ulgulan or Birsa Movement for tribal rights and autonomy.

Statement 3 is correct. The Santhal Rebellion, also known as the Santhal Hul, occurred in 1855-1856 and was one of the earliest and most significant tribal uprisings in India. It was led by the Santhal tribal community in present-day Jharkhand, Bihar, and West Bengal, protesting against the unjust British land policies and oppressive zamindari system.

Based on the explanations above, the correct answer would be (b) 3 only, as only statement 3 is correct.

92. Which of the following statements is/are true regarding "Char Baghs" in medieval India?

1. Charbagh is a Persian-style garden layout introduced to India during the medieval period, characterized by the division of the garden into four equal quadrants by water channels.
2. Persian Char Baghs were primarily used for agricultural purposes and were known for their advanced irrigation systems.

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

Answer: a

Explanation:

- Statement 1 is Correct: Persian Char Baghs were indeed a type of garden layout introduced to India during the medieval period. They were characterized by the division of the garden into four equal quadrants or sections by water channels. This layout was intended to represent the four rivers of paradise mentioned in Islamic tradition and symbolized the concept of paradise on earth.
- Statement 2 is Incorrect. Char Baghs were not primarily used for agricultural purposes. The char Bagh structure was intended to create a representation of heaven- in which humans co-exist in perfect harmony with all elements of nature. While they did have irrigation systems to maintain the gardens and the flow of water in the channels, their main purpose was to create an idyllic environment rather than serving agricultural needs.

93. Consider the following statements:

1. The Qutub Shahi Dynasty was a ruling dynasty in South India that established the kingdom of Golconda and played a significant role in the Deccan region during the medieval period..
2. The founder of the Qutub Shahi Dynasty was Sultan Quli Qutub Shah, who established the dynasty at the capital city of Hyderabad.

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

Answer: c

Statement 1 is correct. The Qutub Shahi Dynasty ruled over the Deccan region from the late 16th century to the early 18th century. They were known for their patronage of various art forms, including architecture, literature, and music. The dynasty witnessed a flourishing cultural and architectural renaissance, leaving behind remarkable structures and artistic contributions.

Statement 2 is correct. The founder of the Qutub Shahi Dynasty was Sultan Quli Qutub Shah. He established the dynasty in 1518 and founded the capital city of Hyderabad, which became a center of power and culture under the Qutub Shahi rule.

94. In context of the slave dynasty's rulers, which of the following ruler ruled the Delhi Sultanate earliest?

- (a) Aram Shah
- (b) Razia al-Din
- (c) Ala-ud-din Masud
- (d) Ghiyas-ud-din Balban

Ans: a

Explanation

List of Slave dynasty Rulers

Ruler:	Reign
• Qutb ud-Din Aibak	(1206–1210 AD)
• Aram Shah	(1210–1211 AD)
• Iltutmish	(1211–1236 AD)
• Rukn-ud-din Feroze	(1236 AD)
• Razia al-Din	(1236–1240 AD)
• Muiz-ud-din Bahram	(1240–1242 AD)
• Ala-ud-din Masud	(1242–1246 AD)
• Nasiruddin Mahmud	(1246–1266 AD)
• Ghiyas-ud-din Balban	(1266–1286 AD)
• Muiz-ud-din Muhammad Qaiqabad	(1286–1290 AD)

95.“He was proclaimed as the Crown Prince. He translated 50 Upanishads into Persian from Sanskrit. He was called as “Akbar e Sani” because of his tendencies and popularity among the people (Second Akbar).”

Which of the following correctly refers to the above passage given?

(a) Shah Alam

- (b) Bahadur Shah Zafar
- (c) Dara Shikoh
- (d) Akbar II

Ans: c

Explanation

- Dara Shikoh was the fifth Mughal Emperor Shah Jahan's eldest son and heir apparent. Dara Shukoh is often regarded as an enlightened ideal of the Indian subcontinent's harmonious coexistence of unorthodox traditions. He was a poetic diviner of syncretic cultural connection among people of all faiths and an erudite proponent of mystical religious research.
- In the views of his orthodox younger brother, he was a heretic, and in the eyes of many of the worldly power players flocking about the Mughal throne, he was a questionable eccentric. Dara Shikoh was a devotee of the Persian "perennialist" mystic Sarmad Kashani, as well as Hazrat Mian Mir, the famed Qadiri Sufi saint of Lahore, whom he met through Mullah Shah Badakhshi (Mian Mir's spiritual teacher and successor). Mian Mir was so well-liked by all communities that the Sikhs asked him to lay the foundation stone for the Golden Temple in Amritsar. Dara Shikoh afterwards formed a friendship with Guru Har Rai, the seventh Sikh Guru. Dara Shikoh spent a lot of time trying to develop a shared spiritual language between Islam and Hinduism.
- In order to achieve this purpose, he completed the translation of fifty Upanishads from Sanskrit to Persian in 1657, so that Muslim scholars might study them. His most famous work, Majma-ul-Bahrain ("The Confluence of the Two Seas"), is devoted to a revelation of the mystical and pluralist works referred to in the Quran as the "Kitab al maknun" or hidden book.
- In 1654–1655, the book was written as a short Persian treatise. Dara Shukoh's library is still standing on the premises of Guru Gobind Singh

Indraprastha University in Kashmiri Gate, Delhi, and has been converted into a museum by the Archaeological Survey of India.

96. With reference to India's culture and tradition, what is 'Gatka'?

- (a) It is an ancient devotional music form practiced in the temples of North India.
- (b) It is an ancient style of pottery and ceramics that originated in the Gangetic plains.
- (c) It is an ancient form of traditional wrestling and martial arts that originated in Punjab.
- (d) It is an ancient dance form performed during harvest festivals in the coastal regions of South India.

Answer: c

Explanation: Gatka is an ancient martial art and a living tradition in some parts of India, particularly in the state of Punjab. It is a traditional Sikh martial art form that involves the use of various weapons such as swords, sticks, and daggers. Gatka is not only a means of combat but also a way to preserve the cultural heritage and warrior traditions of the Sikh community. Practitioners of Gatka display their skills through various movements, stances, and techniques. The correct answer, in this case, would be (c) It is an ancient form of traditional wrestling and martial arts that originated in Punjab.

97. Consider the following regarding CAR-T therapy

- 1. CAR-T therapy involves editing T cells in a laboratory setting to prompt them to combat cancer, essentially harnessing these immune cells to fight the disease.
- 2. B-cells and T-cells are also called lymphocytes.

Which of the following is/are correct?

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

Answer: c

Explanation:

- To fight cancer, T cells - a type of white blood cell that attacks foreign pathogens - can be edited in a laboratory using a method known as CAR-T therapy. The process involves extracting T cells from the patient's blood and adding a man-made receptor gene called CAR, designed to bind to specific proteins on cancer cells, to create CAR-T cells.
- These cells are then reintroduced into the patient. CAR-T therapy has the potential to cure certain types of cancer and is administered only once, unlike chemotherapy. The treatment time is short, and recovery is rapid compared to other cancer treatments.
- Lymphocytes, also known as B-cells and T-cells, are a type of white blood cell that play a vital role in the immune system.
- B cells generate antibodies that target and attack invading bacteria, viruses, and toxins.
- These antibodies are unique Y-shaped proteins that match a particular pathogen.
- On the other hand, T cells directly combat foreign invaders and produce cytokines, which are molecules that activate other parts of the immune system.
- T cells also eliminate body cells that have been hijacked by viruses or have become cancerous.

98. Consider the following regarding Double Asteroid Redirection Test (DART) Mission

1. It was carried out by NASA
2. The objective was to alter the motion of an asteroid by using kinetic impact.

Which of the following is/are correct?

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

Answer: c**Explanation:**

- NASA recently conducted the DART mission on the Didymos binary asteroid system, where a kinetic impactor technology was tested by crashing a spacecraft. The Didymos system is composed of the asteroid Didymos and its small moonlet, Dimorphos, which orbits the larger asteroid.
- DART is a one-of-a-kind spacecraft developed to deflect an asteroid's path through kinetic impact, potentially saving the Earth from an incoming asteroid. To monitor the impact, the James Webb Space Telescope and Hubble telescope were used to track the spacecraft and observe the asteroid.

99. The term 'Betelgeuse' seen in news related to

- (a) A kind of Bacteria
- (b) Asteroid
- (c) Black hole
- (d) None of the above

Answer: d**Explanation:**

- Betelgeuse is a red supergiant star located in the constellation of Orion. It is one of the most massive stars known and is expected to end its life in a supernova explosion.
- The term 'Betelgeuse' has been used in news related to the discovery of a new type of star, the 'Betelgeuse' star, which is a red supergiant star.

- Betelgeuse is a **red supergiant star** located on the shoulder of Orion. Red giants are stars that are in the final stages of their evolution. In late 2019, Betelgeuse became fainter than it had ever been before.
- Researchers now believe that the star likely experienced a massive surface mass ejection (SME) event, ejecting 400 billion times more mass than a typical event seen on other stars. SMEs occur when a star expels large amounts of plasma and magnetic flux into space, but the exact cause of Betelgeuse's SME is still unclear.

100. Which of the following statements is/are correct about LTE (Long Term Evolution)?

1. It is a wireless broadband technology that allows cell phones and portable devices to access the Internet while roaming.
2. LTE delivers maximum download speeds of 299.6 GB/s.
3. LTE necessitates new network technologies as well as masts and radios.

Select the correct answer using the codes given below:

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

Answer: c.

Explanation:

- LTE (Long Term Evolution) is a wireless broadband technology that allows cell phones and portable devices to access the Internet while roaming. LTE, along with WiMAX, is referred to as a 4G (fourth generation) technology since it provides considerable enhancements over prior cellular communication technologies.
- Long Term Evolution (LTE), sometimes known as 4G LTE, is a wireless communication standard for high-speed communications for mobile phones and data terminals.
- The first step toward actual 4G technologies is Long Term Evolution, or LTE. Download speeds of 100 Mb/s and 1 Gb/s should be available from moving (i.e. in a car) and pedestrian sites, respectively, to be considered true 4G technology. However, it was largely agreed that firms could sell LTE as "4G LTE" due to the fact that several had already done so and to avoid further customer confusion with the phrases 3.5G and 3.9G that were beginning to arise.
- Although some carriers running LTE networks have provided rates that are occasionally lower than the apparently "inferior" HSPA (plus) technology,
- LTE delivers maximum download speeds of 299.6 Mb/s. Commercially available speeds vary greatly, with tests showing ranging from 8 to 50 Mb/s in available areas using the (at the time of writing) freshly released UK LTE network.
- LTE necessitates new network technologies as well as masts and radios. This also means that LTE-enabled devices will require a receiver that is compatible



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