

Test Series Question Paper-09-04-2024

Q 1. Consider the following statements with reference to 'anti-defection law'.

1. Disqualification on the ground of defection will not apply in case of split of a political party if two-third of the member of political party concerned agreed to split.
2. A member of a House belonging to any political party becomes disqualified, if he/she voluntarily gives up his/her membership of such political party.
3. An independent member of a House becomes disqualified to remain a member of the House if he/she joins any political party after such election.

How many of the above statements is/are correct?

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

Ans:(c)

Explanation:

- **Statement 1 is correct: Disqualification on the ground of defection not to apply in case of split.** —(1) A member of a Municipality shall not be disqualified under sub-section (1) of section 18-A where he and any other member of his original political party constitute the group representing a faction which has arisen as a result of split in his original political party and from the time of such split, such faction shall be deemed to be the political party to which he belongs for the purposes of sub-section (1) of section 18-A and to be his original political party for the purposes of this sub-section.
- For the purposes of sub-section (1), the split of the original political party of a member of a Municipality shall be deemed to have taken place if and only if not less than two-third of the members of the political party concerned have agreed to such split.
- **Statement 2 is correct:** A member of a House belonging to any political party becomes disqualified, if he/she voluntarily gives up his/her membership of such political party.
- **Statement 3 is correct:** An independent member of a House becomes disqualified to remain a member of the House if he/she joins any political party after such election.

Q 2. Consider the following statements:

1. Currently, the total number of seats in Parliament and Assembly constituencies is based on the 1971 census.
2. As per constitution there should be readjustment of seats in Parliament and Assembly constituencies after each census.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2

- (c) Both 1 and 2
(d) Neither 1 nor 2

Ans:(c)

Explanation:

- Statement 1 is correct: **Currently, the total number of seats in Parliament and Assembly constituencies is based on the 1971 census.** However, boundaries of constituencies were altered in 2001 to equate population among the parliamentary and assembly seats; but total number of seats remained unaltered.
- Statement 2 is correct: **Article 82- Readjustment after each census** Upon the completion of each census, the allocation of seats in the House of the People to the States and the division of each State into territorial constituencies shall be readjusted by such authority and in such manner as Parliament may by law determine

Q 3. Consider the following:

1. Registration of political parties.
2. Electoral rolls for Parliamentary, Assembly and Council constituencies.
3. Bye-elections and time limit for filling vacancies.

How many of the above provisions is/are under "The Representation of the People Act, 1951"?

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

Ans:(b)

Explanation:

- Provision of registration of political parties is under **The Representation of the People Act, 1951".**
- Provision of Electoral rolls for Parliamentary, Assembly and Council constituencies is under **The Representation of the People Act, 1950.**
- Provision of Bye-elections and time limit for filling vacancies is **under The Representation of the People Act, 1951". So, option (b) is correct**

Q 4. Consider the following statements:

1. Model code of conduct (MCC) are enforceable by the law.
2. The Election Commission of India (ECI) has the power to penalize candidates or political parties for violations of the MCC.

Which of the above statements is/are correct?

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

Ans:(d)

Explanation:

- **Statement 1 is incorrect:** MCC is a set of obligatory guidelines that need to be followed for fair passage of elections and are formulated with proper consensus of the parties contesting the polls. **However, model code of conduct (MCC) is not enforceable by the law.**
- **Statement 2 is incorrect:** The Election Commission of India (ECI) don't have the power to penalize candidates or political parties for violations of the MCC. MCC is not admissible in the court of law as a wholesome rule book with penalties accorded. Warnings from CEC or the EC are mostly the first and the last step in curbing these violations.

Q 5. Consider the following statements:

1. The Constitution has defined the persons who belong to the Anglo-Indian community.
2. The President has the power to specify as to what castes or tribes in each state and union territory are to be treated as the SCs and STs.
3. The constitution has specified the classes of citizens who are to be called the socially and educationally backward classes.

How many of the above statements is/are correct?

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

Ans:(b)

Explanation:

- **Statement 1 is correct:** Unlike in the case of SCs, STs and OBCs, **the Constitution has defined the persons who belong to the Anglo-Indian community.** Accordingly, 'an Anglo-Indian means a person whose father or any of whose other male progenitors in the male line is or was of European descent but who is domiciled within the territory of India and is or was born within such territory of parents habitually resident therein and not established there for temporary purposes only'.
- **Statement 2 is correct:** The President has the power to specify as to what castes or tribes in each state and union territory are to be treated as the SCs and STs . Thus, the lists of the SCs or STs vary from state to state and union territory to union territory.

- **Statement 3 is incorrect: The constitution has not specified the classes of citizens who are to be called the socially and educationally backward classes, also known as Other Backward Classes (OBCs).** The 102nd Amendment Act of 2018 empowered the President to specify the socially and educationally backward classes in relation to a state or union territory.

Q 6. An RBI-appointed committee has recommended the 'extension of Deposit Insurance and Credit Guarantee Corporation (DICGC)' cover to PPIs. In this regard consider the following:

1. Fixed Deposits
2. Inter-bank deposits
3. Deposits of Central Governments
4. Recurring Deposit

How many of the above are not covered under DICGC?

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

Ans: (b)

Explanation:

- Deposit Insurance and Credit Guarantee Corporation (DICGC) is a statutory body established under the Deposit Insurance and Credit Guarantee Corporation Act, of 1961. It is a wholly-owned subsidiary of the Reserve Bank of India (RBI).
- The DICGC insures all deposits such as savings, fixed, current, recurring, etc. deposits except the following types of deposits:
 - Deposits of foreign Governments.
 - Deposits of Central/State Governments.
 - Interbank deposits.
 - Deposits of the State Land Development Banks with the State Cooperative Bank.
 - Any amount due on account of any deposit received outside India.
 - Any amount, that has been specifically exempted by the corporation with the previous approval of the Reserve Bank of India.

So, option (b) is correct.

Q 7. With reference to the Kolkali, consider the following statements:

1. This folk-art form is performed in the state of Kerala.
2. The characters in a Kolkali performance are broadly divided into satvika, rajasika, and tamasika types.
3. It is also known as 'Nangai Natakam'.

How many of the above statements is/are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** With a history of about 200 years, Kolkali is a folk art form performed in the North Malabar region of Kerala. It is said to have drawn elements from Kalaripayattu, a martial art practiced in Kerala and Tamil Nadu.
- **Statement 2 is incorrect:** Kathakali dance is chiefly interpretative. The characters in a Kathakali performance are broadly divided into satvika, rajasika and tamasika types.
- **Statement 3 is incorrect:** Mohiniyattam interpreted as the dance of 'Mohini', the celestial enchantress of the Hindu mythology, is the classical solo dance form of Kerala. Their dances were known as 'Nangai Natakam, Dasiyattam, Tevitichiyattam, etc.

Q 8. Recently, Yemen's Houthi rebels hijacked an India-bound ship in the Red Sea. Which of the following are bordering countries of the Red Sea?

1. Oman
2. Somalia
3. Saudi Arabia
4. Eritrea
5. Djibouti

Select the correct answer using the code given below:

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

Ans: (c)

Explanation:



Q 9. Recently, Scientists have discovered a new species of music frog named Nidirana noadihing. The frog was discovered from which of the following states?

- (a) Meghalaya
- (b) Nagaland
- (c) Arunachal Pradesh
- (d) Mizoram

Ans: (c)

Explanation:

- Scientists have discovered a new species of 'music frog' in Arunachal Pradesh. The specialty of this new species of frog, Nidirana noadihing, is that both the male and female are vocal.
- Nestled within vegetation in shallow pools of water, the scientists found male frogs with 'robust' bodies calling loudly.

So, option (c) is correct.

Q 10. Consider the following statements regarding Crime in India report for year 2022:

1. It is an annual report publish by the National Crime Records Bureau.
2. The crimes registered per lakh population has declined as compare to 2021.
3. Reporting of cybercrime increased significantly as compared to 2021.

How many of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** The National Crime Records Bureau (NCRB) released its annual report on crime in India for the year 2022.
- **Statement 2 is correct:** The crime rate, or crimes registered per lakh population, has declined from 445.9 in 2021 to 422.2 in 2022. This is seen as a better indicator, since absolute numbers on crime increase as the population increases.
- **Statement 3 is correct:** Reporting of cybercrime increased significantly by 24.4 percentage points compared to 2021, to 65,893 cases. Around 64.8% of registered cases were of fraud, followed by extortion (5.5%), and sexual exploitation (5.2%).

Q 11. Recently, a new enigmatic layer (E Prime layer) has been formed at the outermost part of Earth's core. Which of the following can be the possible reason for such formation?

- (a) Due to the Earth's magnetism
- (b) Due to an intense burst of radiation coming from the sun
- (c) Due to the passing of Planet killer asteroid near Earth
- (d) Due to Penetration of surface water deep into the planet.

Ans: (d)

Explanation:

- The formation of a new enigmatic layer – E prime layer – at the outermost part of Earth's core is a result of "surface water penetrating deep into the planet," altering the composition of the metallic liquid core's outermost region.
- This latest research suggests that tectonic plates carrying surface water have transported it deep into the Earth over billions of years. Upon reaching the core-mantle boundary about 1,800 miles below the surface, this water initiates significant chemical changes, influencing the core's structure.

So, option (d) is correct.

Q 12. Consider the following pairs:

Landform	Process by which they are formed.
1. Erratics	Glaciation
2. Yardangs	Wind abrasion
3. Mesas and buttes	Coastal erosion

How many of the above pairs is/are correctly matched?

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

Ans: (b)

Explanation:

- **Pair 1 is correct:** Erratics are boulders of varying sizes that were transported by ice. They came with the advancing glaciers or ice sheets but when the ice melted, they were left 'stranded' in the regions of deposition.
- **Pair 2 is correct:** A yardang is a long, narrow, landform formed by the forces of wind. Wind abrasion cuts the bands of softer rocks into long, narrow corridors, separating the steep -sided over -hanging ridges of hard rocks called as yardang.

- **Pair 3 is incorrect:** Mesa and buttes are feature of Desert landform (not Coastal landform). These are flat, table-like land mass with a very resistant horizontal top layer, and very steep sides formed by action of wind.

Q 13. Consider the following statements:

1. The Sahara, The Thar, and The Gobi deserts are Trade wind deserts.
2. The Sahara Desert is the driest desert in the world.

Which of the above statements is/are correct?

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

Ans:(d)

Explanation:

- **Statement 1 is incorrect:** Trade wind Deserts are area of very little rainfall and high temperature as trade winds here are off shore. The Sahara, The Thar are the Trade wind Deserts, while The Gobi desert is a mid-latitude Desert away from trade winds and lies in the interior of Continent .
- **Statement 2 is incorrect:** The Atacama Desert is the driest place on earth, other than the poles. It receives less than 1 mm of precipitation every year, and some areas haven't seen a drop of rain in more than 500 years.

Q 14. With reference to Karst Region, which one of the following is the correct sequence in ascending order in terms of size?

- (a) Swallow holes-Uvala-Doline
- (b) Uvala-Doline-Swallow holes
- (c) Uvala -Swallow holes-Doline
- (d) Swallow holes-Doline-Uvala

Ans:(d)

Explanation:

- **Swallow holes are small depressions** on the surface of the limestone which are carved out by solution where rain-water sinks into the limestone at a point of weakness. **When number of swallow holes coalesce a larger hollow is formed called as a doline .When several dolines merge as a result of subsidence a larger depression is formed called as an uvala.**

Q 15. Consider the following statements with reference to the Lake Assal:

1. It is the the lowest point on the surface of the continent of Africa.
2. It is a fresh water lake.

Which of the above statements is/are correct?

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

Ans: (a)

Explanation:

- Statement 1 is correct: Lake Assal, Djibouti is the lowest point on the surface of the African continent -510ft (155m) below sea level .it is also one of the hottest place with its summer temperature touching 57 C (135F).
- Statement 2 is incorrect: Lake Assal is a crater lake in central-western Djibouti. **It is a saline lake** which lies 155 m below sea level in the Afar Triangle, making it the lowest point on land in Africa and the third-lowest point on Earth after the Sea of Galilee and the Dead Sea.

Q 16. Consider the following pairs

Island	Location
1. Zanzibar	Atlantic Ocean
2. Tahiti	Indian Ocean
3. Cook	Pacific Ocean

How many of the above pairs is/are correctly matched?

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

Ans:(a)

Explanation:

- **Pair 1 is incorrect:** Zanzibar is a small archipelago off the Tanzanian coast of East Africa in **Indian Ocean**. A mix of African and Arab influences throughout history led to the development of a unique culture on this island.
- **Pair 2 is incorrect:** Tahiti is the largest in a chain of islands that make up French Polynesia. It is located in South Pacific Ocean. The island of Tahiti is divided into two parts: The larger portion to the northwest is known as Tahiti Nui, while the smaller, southeastern peninsula is known as Tahiti Iti.
- **Pair 3 is correct:** The Cook Islands consist of total 15 Islands scattered over the South **Pacific Ocean**. The largest island, Rarotonga, is home to rugged mountains and Avarua, the national capital.

Q 17. Consider the following pairs:

Local winds	Country
1. Brickfielder	Australia
2. Berg	South Africa
3. Khamsin	Iran

How many of the above pairs is/are correctly matched

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

Ans: (b)

Explanation:

- **Pair 1 is correct:** The Brickfielder is a strong, hot, dry and dusty wind in southern Australia. The Brickfielder usually occurs during summer and is mainly affecting southeast Australia's states of Victoria and New South Wales.
- **Pair 2 is correct:** A hot, dry, squally wind blowing off the interior plateau of South Africa, roughly at right angles to the coast. Berg winds blow mainly in winter, when a strong anticyclone occupies the interior plateau, producing outflow across the coastal regions of South Africa.
- **Pair 3 is incorrect:** The Khamsin is an oppressive, hot, dry and dusty south or south-east wind occurring in N. Africa, around the E Mediterranean and the Arabian Peninsula intermittently in late winter and early summer, but most frequently between April and June.

Q 18. Consider the following statements

1. No tornadoes have been recorded on Antarctica.
2. U.S.A witness's maximum number of other than any country.
3. The world's single deadliest tornado in recorded history occurred in Bangladesh.

How many of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** Tornadoes is a rotating column of air ranging in width from a few yards to more than a mile with wind speeds ranging from 67 to 300 mph, usually accompanied by a funnel-shaped downward extension of a cumulonimbus cloud. **Tornadoes have been recorded on every continent except Antarctica.**
- **Statement 2 is correct:** The United States averages over 1,200 tornadoes every year. That's more than any other country. In fact, it's more than Canada, Australia and all European countries combined.
- **Statement 3 is correct:** According to the World Meteorological Organization, the world's single deadliest tornado struck the Manikganj district of Bangladesh on April 26, 1989. The violent tornado carved a path a mile wide and 10 miles long, destroying the towns of Manikganj Sadar and Satoria. An estimated 1,300 people were killed and an additional 12,000 injured.

Q 19. With reference to Haze, Fog and Mist, which one of the following is correct sequence in increasing order of their visibility?

- (a) Fog-Mist-Haze
- (b) Mist-Fog-Haze
- (c) Haze-fog-Mist
- (d) Mist-Haze-Fog

Ans: (a)

Explanation:

Fog-Mist-Haze

- **Fog is ground level cloud reducing horizontal visibility to less than 1km. Fog is a real danger for general aviation pilots,** and can even be for one under certain conditions for commercial pilots. Mist is a phenomenon consisting of a large amount of water droplets/ice crystals present in a layer of the atmosphere. **Mist does not represent a real danger for commercial aviation pilots, visibility is between 1km and 5km.** Contrary to fog and mist, haze is a horizontal visibility reduction due to non-aqueous particles. In this, **horizontal visibility is less than 5km.**

Q 20. Consider the following statements:

1. Water that rises to the surface as a result of upwelling is warm, rich in nutrients, and biologically productive.
2. The west coasts of Africa and South America are rich fishing ground.

Which of the above statements is/are correct?

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

Ans:(b)

Explanation:

- **Statement 1 is incorrect:** Winds blowing across the ocean surface often push water away from an area. When this occurs, water rises up from beneath the surface to replace the diverging surface water. This process **is known as upwelling**. Water that rises to the surface as a result of upwelling **is cold**, rich in nutrients, and biologically productive.
- **Statement 2 is correct:** The west coasts of Africa and South America are supported by **year-round coastal upwelling**. **Therefore, good fishing grounds are found here. Another area of upwelling which is seasonal, forms in the northwestern Indian Ocean (Somali-Arabian Sea upwelling system) as a consequence of the Asian monsoon.**

Q 21. Consider the following statements with reference to the Danube River:

1. The Danube River, passes through maximum number of countries in the world.
2. It is longest river in the Europe.
3. It drains into the North Sea.

How many of the above statements is/are correct

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

Ans: (a)

Explanation:

- Statement 1 is correct: **The Danube River, passes through maximum number of countries in the world. It passes through 10 countries:** Germany, Hungary, Romania, Austria, Serbia, Bulgaria, Croatia, Moldova, Ukraine, Slovakia.
- Statement 2 is incorrect: **The Volga River** is the longest in Europe, draining 20% of European land area and supplying 80% of the Caspian's freshwater inflow. When water from the river enters the **Volga Delta**, Europe's largest inland river delta, it splits up into more than 1000 waterways.
- Statement 3 is incorrect: The Danube River raises at the confluence of the two-source river Brigach and Breg near Donaueschingen in the Black Forest in Germany. However, by agreement the source of the Danube is considered a spring in the castle of Donaueschingen. The Danube River is 2778 km long and **drains into the Black Sea.**

Q 22. Consider the following pairs:

National park	Country
1. Bogd Khan Mountain	Afghanistan
2. Sarek National park	Sweden
3. Virunga National Park	Kenya

How many of the above pairs is/are correct?

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

Ans: (a)

Explanation:

- **Pair 1 is incorrect: Bogd Khan Mountain national park ,Mangolia** is first protected national park in the world, since 1778. Because of its religious significance this beautiful mountain has been untouched for centuries in terms of utilizing its resources and hunting animals.
- **Pair 2 is correct: Sarek National Park is the oldest national park in Europe.** It, is located in northern Sweden in Jokkmokk Municipality, Lapland . It was established in 1909 and is located north of the Arctic Circle.
- **Pair 3 is incorrect: The Virunga national park is a UNESCO world heritage site is the oldest national park in Africa.** It was Established in 1925 and located in Democratic Republic of the Congo.

Q 23. Arrange the following cities in order from north to south:

1. Tokyo
2. Seoul
3. Beijing
4. Pyongyang

Select the correct answer using the code given below:

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

Ans:(b)

Explanation:

- Beijing – It is the capital city of the People's Republic of China Latitude and longitude coordinates are: 39.916668 N ,116.383331 E
- Pyongyang is the capital and the largest city in North Korea. Latitude and longitude coordinates are: 39.019444 N, 125.738052 E
- Seoul is a largest city and the capital of South Korea. Latitude and longitude coordinates are: 37.532600 N,127.024612 E
- The latitude of Tokyo, Japan is 35.652832 N and the longitude is 139.839478 E.

Q 24. Consider the following statements:

1. India is the largest exporter of turmeric in the world.
2. The Chairperson of the National Turmeric Board is to be appointed by the President.
3. Uttar Pradesh is the largest turmeric state in India.

How many of the above statements is/are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** India is the largest producer, consumer, and exporter of turmeric in the world. In the year 2022-23, an area of 3.24 lakh ha was under turmeric cultivation in India with a production of 11.61 lakh tonnes (over 75% of global turmeric production).
- **Statement 2 is incorrect:** The Board shall have a Chairperson to be appointed by the Central Government, members from the Ministry of AYUSH, Departments of Pharmaceuticals, Agriculture & Farmers Welfare, Commerce & Industry of the Union Government, senior State Government representatives from three states (on rotation basis), select national/state institutions involved in research, representatives of turmeric farmers and exporters, and have a Secretary to be appointed by the Department of Commerce.
- **Statement 3 is incorrect:** The largest producing states of Turmeric are Maharashtra, Telangana, Karnataka, and Tamil Nadu. India has more than 62% share of world trade in turmeric.

Q 25. Consider the following statements:

1. The followers of the Sarna faith do not practice idol worship.
2. A sizable number of tribal people in Jharkhand believe in the Sarna faith.

Which of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** Those who follow the Sarna faith are nature worshippers with jal (water), jungle (forest) and zameen (land) as holy entities. They do not practice idol worship or follow the varna system.

- **Statement 2 is correct:** A sizable number of tribal people in Jharkhand believe in the Sarna faith. The Jharkhand assembly had passed a resolution demanding the Sarna dharma code to be included in the census.

Q 26. Recently, the 'World Investment Report' was seen in the news. Which of the following organizations publishes the report?

- (a) World Bank
- (b) International Monetary Fund
- (c) United Nations Conference on Trade and Development
- (d) World Economic Forum

Ans: (c)

Explanation:

- The World Investment Report is a flagship publication of the United Nations Conference on Trade and Development.
- The World Investment Report focuses on trends in foreign direct investment (FDI) worldwide, at the regional and country levels, and emerging measures to improve its contribution to development.
- It also provides an analysis of global value chains and the operations of multinational enterprises, with special attention to their development implications.

So, option (c) is correct.

Q 27. With reference to the "Global Hunger Index 2023", consider the following statements:

1. The Global Hunger Index is a bi-annual report jointly published by Concern Worldwide and Welthungerhilfe.
2. Child wasting and Child mortality are a few indicators that capture the multidimensional nature of hunger.

Which of the above statements is/are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect:** The Global Hunger Index is a peer-reviewed annual report, jointly published by Concern Worldwide and Welthungerhilfe, designed to comprehensively measure and track hunger at the global, regional, and country levels. The GHI aims to trigger action to reduce hunger around the world.

- **Statement 2 is correct:** Each country's GHI score is calculated based on a formula that combines four indicators that together capture the multidimensional nature of hunger:
 - Undernourishment: the share of the population whose caloric intake is insufficient.
 - Child stunting: the share of children under the age of five who have low height for their age, reflecting chronic undernutrition.
 - Child wasting: the share of children under the age of five who have low weight for their height, reflecting acute undernutrition.
 - Child mortality: the share of children who die before their fifth birthday, reflecting in part the fatal mix of inadequate nutrition and unhealthy environments.

Q 28. With reference to the Shrestha scheme, consider the following statements:

1. The scheme aims to provide an environment for socio-economic upliftment and overall development of the Scheduled Castes (SCs).
2. It is a Central Sector Scheme.
3. It is implemented under the aegis of the Ministry of Education.

How many of the above statements is/are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is correct:** The Shrestha scheme aims to provide environment for socio-economic upliftment and overall development of the Scheduled Castes (SCs) by providing financial assistance to best private residential schools affiliated by CBSE/ State Board in class 9th & 11th for completion of education till 12th standard.
- **Statement 2 is correct:** It is a Central Sector Scheme. All initiatives wholly sponsored and implemented by the Central Agencies are included in the Central Sector Schemes.
- **Statement 3 is incorrect:** The Ministry of Social Justice & Empowerment implements a Scheme for Residential Education for Students in High Schools in Targeted Areas (SHRESHTA).

Q 29. 'Chausath Yogini Temple' of Morena was seen in news recently, in this regard consider the following statements:

1. The temple was built by the Kachchhapaghata king Devapala.
2. The temple is dedicated to the Lord Shiva.
3. The Chausath Yogini Temple of Morena, also known as Ekattarso Mahadeva Temple.

How many of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** The Chausath Yogini temple is in Mitaoli village. According to an inscription dated to 1323 CE (Vikram Samvat 1383), the temple was built by the Kachchhapaghata king Devapala (r. c. 1055 – 1075).
- **Statement 2 is correct:** This temple is so named because of the presence of multitude of shivalingas inside its cells. The grand Chausath Yogini temple is circular, with 64 chambers dedicated to the 64 yoginis, and a central shrine dedicated to Shiva.
- **Statement 3 is correct:** The Chausath Yogini Temple, Morena, also known as Ekattarso Mahadeva Temple, stands atop an isolated hill of about a hundred feet high, this circular temple commands a splendid view of the cultivated fields below.

Q 30. Agumbe Rainforest Complex (ARC) received less rainfall than past few years.

Agumbe Rainfall Complex belongs to which state?

- (a) Maharashtra
- (b) Andhra Pradesh
- (c) Karnataka
- (d) Tamil Nadu

Ans: (c)

Explanation:

- Karnataka's Agumbe Rainforest Complex (ARC) has been on school textbooks for its phenomenal rainfall ever since the British erected the first rain gauge there in 1882. Agumbe in Shivamogga district had been christened as the 'Cherrapunji of the South' for receiving over 8,000 mm of rainfall during the monsoon.
- ARC received its peak rainfall of 6,000 mm during the monsoon months of June and August. But, for two years now, the peak monsoon rainfall here has been wavering in the range of 5,250 mm-5,500 mm, leading to Agumbe losing its crown to little-known towns in Udipi district.

So, option (c) is correct.

Q 31. With reference to the "Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE)", Consider the following statements:

1. The main objective is to produce oxygen from the Martian carbon-dioxide atmosphere.
2. This experiment is launched by the European Space Agency.

Which of the above statements is/are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** The Mars Oxygen In-Situ Resource Utilization Experiment, or MOXIE, is helping NASA prepare for human exploration of Mars. The main job is to produce oxygen from the Martian carbon-dioxide atmosphere.
- **Statement 2 is incorrect:** NASA's Mars Oxygen In-Situ Resource Utilization Experiment has successfully completed its mission, marking a significant milestone in paving the way for human exploration of Mars.

Q 32. With reference to the System of Air Quality and Weather Forecasting and Research (SAFAR), consider the following statements:

1. It is an initiative introduced by the Ministry of Earth Sciences (MoES).
2. Both SAFAR and Air Quality Index (AQI) monitors the same pollutants.

Which of the above statements is/are incorrect?

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

Ans: (b)

Explanation:

- **Statement 1 is correct:** The System of Air Quality and Weather Forecasting and Research (SAFAR) is an initiative introduced by the Ministry of Earth Sciences (MoES). The system will be an integral part of India's first Air Quality Early Warning System operational in Delhi. SAFAR will accelerate public awareness and preparedness of air pollution and weather extremes. It will also lead to better understanding of linkages among emissions, weather, pollution and climate. It will monitor all weather parameters like temperature, rainfall, humidity, and wind speed and wind direction.
- **Statement 2 is incorrect:** **AQI** is calculated for eight major air **pollutants**: Ground-level ozone, PM10, PM2.5, Carbon monoxide, Sulphur dioxide, Nitrogen dioxide, Ammonia, Lead. In addition to regular air quality parameters like PM2.5, PM10, Sulphur Dioxide, Ozone, Nitrogen Oxides, Carbon Monoxide, the **SAFAR** system will also monitor the existence of Benzene, Toluene and Xylene.

Q33. Which of the following best defines the term 'Currency Peg'?

- (a) Value of a country's currency is directly linked to another currency, a basket of currencies, or another measure of value, and the exchange rate is fixed.
- (b) A currency regime where the exchange rate is determined by the forex market based on supply and demand, but the central bank can intervene occasionally to stabilize the currency's value.

- (c) A strict type of interlinking where the country's central bank commits to convert its domestic currency on demand into a specified foreign currency at a fixed exchange rate, holding reserves of the foreign currency to fully back the domestic currency in circulation.
- (d) A system where the value of the currency is allowed to fluctuate according to the foreign exchange market, without any intervention by the country's central bank.

Ans: (a)

Explanation:

- A currency peg is when the government or monetary authority of a country fixes a specific exchange rate with a foreign country's currency. A currency peg could also be with reference to a set of currencies or with reference to other widely traded commodities. **So, option (a) is correct.**

Q 34. Which of the following will directly impact the yield of a bond in India?

- (a) Increase in remittances
- (b) Increase in forex reserve
- (c) Increase in foreign portfolio investment
- (d) All of the above

Ans: (c)

Explanation:

- Increase in remittance will not impact the bond yield as it is not directly associated with bonds. **So, option (a) is incorrect.**
- FDI usually is associated with long term capital assets. **So, option (b) is incorrect.**
- Increase in FPI will increase the demand of the government bonds. Hence, yield of the bond will come down. **So, option (c) is correct.**

Q 35. What will be outcome when Indian government bond will be included in the prominent global indices like JPMorgan Government Bond Index-Emerging Markets (GBI-EM) and Bloomberg Index Services'?

1. Bond yield will fall
2. Domestic lending will decrease

Select the correct answer using the option given below:

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

Ans: (a)

Explanation:

- **Statement 1 is correct.** Such inclusions, could lead to billions of dollars' worth of inflows into India's rupee-denominated government debt. As demand rises, bond yields fall, supporting the local currency.
- **Statement 2 is incorrect.** As a consequence of these stable long-term global investments, Indian banks, the largest investors of government securities, will be able to lend more domestically, leading to infrastructure creation and employment generation. India's sovereign bond market was valued at \$1.2 trillion as of October 2023 and is broadly dominated by domestic institutional investors.

Q 36. Consider the following:

1. Rise in use of alternate currency like Chinese renimbi.
2. Use of cryptocurrency like Bitcoin.
3. Increased financial inclusivity by countries.

How many of the above can be the consequence of de-dollarization?

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

Ans: (d)

Explanation:

- **Statement 1 is correct.** China is the world's second-largest economy and is becoming increasingly influential in the global trade. China has been promoting the use of its currency, the renminbi, as an alternative to the dollar.
- **Statement 2 is correct.** Cryptocurrencies, such as Bitcoin, are a new form of digital currency that is not subject to government control. This has made them attractive to people who are looking for an alternative to the dollar.
- **Statement 3 is correct.** Nations that are at odds with the US or face geopolitical pressures may seek to minimize their exposure to the dollar, reducing their vulnerability to potential sanctions or economic pressures. This shift towards a multipolar global financial system, where no single currency dominates, may lead to increased financial inclusivity and reduced vulnerabilities associated with currency fluctuations.

Q 37. The Interim Budget for 2024-25 announcement for implementation of Economic Railway Corridors identified under the PM GatiShakti for enabling multi-modal connectivity. Consider the following in this regard:

1. Energy, mineral, and cement corridors
2. Port connectivity corridors
3. High traffic density corridors
4. Agricultural products connectivity corridors

How many of the above is/ are NOT the part of the program?

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

Ans: (a)

Explanation:

- The Interim Budget for 2024-25 announcement for implementation of three Economic Railway Corridor identified under the PM GatiShakti for enabling multi-modal connectivity, including (i) energy, mineral, and cement corridors, (ii) port connectivity corridors, and (iii) high traffic density corridors. **So, option (a) is correct.**

Q 38. In which of the following states, Defense Industrial Corridor has been set up?

- (a) Punjab and Rajasthan
- (b) Haryana and Gujrat
- (c) Uttar Pradesh and Tamil Nadu
- (d) Uttar Pradesh and Karnataka

Ans: (c)

Explanation:

The Indian government has initiated the development of two Defence Industrial Corridors (DICs) to bolster the country's defence manufacturing capabilities. These corridors are strategically established in Uttar Pradesh and Tamil Nadu. **So, option (c) is correct.**

Q 39. Consider the following statements with respect to Turkmenistan–Afghanistan–Pakistan–India (TAPI) Pipeline:

1. TAPI pipeline will transport natural gas from the Galkynysh Gas Field in Turkmenistan through Afghanistan into Pakistan and then to Fazilka in India.
2. The length of the pipeline is approximately 4450km.

Which of the above statements is/ are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is correct.** Turkmenistan–Afghanistan–Pakistan–India (TAPI) Gas Pipeline, also known as Trans-Afghanistan Pipeline, is a natural gas pipeline being developed by the Galkynysh – TAPI Pipeline Company Limited with participation of the Asian Development Bank. The pipeline will transport natural gas from the Galkynysh Gas Field

in Turkmenistan through Afghanistan into Pakistan and then to India. Construction on the project started in Turkmenistan on 13 December 2015, while construction of the Afghanistan-Pakistan section of the pipeline was held in February 2018.

- **Statement 2 is incorrect.** The 1,814 km (1,127 mi) pipeline will run from the world's second largest gas field namely Galkynysh gas fields in Turkmenistan through Afghanistan and Pakistan to India. In Afghanistan, TAPI pipeline will be constructed alongside the Kandahar–Herat Highway in western Afghanistan, and then via Quetta and Multan in Pakistan. The final destination of the pipeline will be the Indian town of Fazilka, near the border between Pakistan and India.

Q 40. Consider the following:

Assertion (A): Only union government can levy cess tax.

Reason (R): A cess is imposed when the government looks to raise funds for specific purposes.

- (a) A and R are true and R is the correct explanation of A
- (b) A and R are true and R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Ans: (a)

Explanation:

- Article 270 of the Constitution enables the Union government to levy cess for a “specific purpose under any law made by parliament”. **So, assertion is correct.**
- Cess and surcharges are levied by the Central government for the purposes of the Union under Article 270 and 271 of the Constitution of India. The proceeds of such surcharge and cess go towards meeting certain specific needs such as financing of centrally-sponsored schemes. **So, reason is correct.**
- **Hence, A and R are true and R is the correct explanation of A.**

Q41. Consider the following pairs:

Board	Headquarters
1. National Rubber Board	Tamil Nadu
2. National Coconut Board	Karnataka
3. National Turmeric Board	Odissa

How many of the above pairs is/ are correctly matched?

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

Ans: (a)

Explanation:

- **Pair 1 is incorrectly matched.** National Rubber Board is located at Kottayam in Kerala. (Nodal Ministry - Ministry of Commerce and Industry)
- **Pair 2 is incorrectly matched.** National Coconut Board is located at Kochi in Kerala. (Nodal Ministry - Ministry of Agriculture and Farmers Welfare)
- **Pair 3 is incorrectly matched.** National Turmeric Board is located at Mulug in Telangana. (Nodal Ministry - Ministry of Commerce and Industry)

Q 42. Consider the following statements with respect to National Common Mobility Card?

1. The card is equipped with Near Field Communication (NFC) technology.
2. The card also supports offline payment.

Which of the above statements is/ are correct?

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

Ans: (c)

Explanation:

Key features of the NCMC:

- **Interoperability:** The card is usable across various modes of transport nationwide, including metro, buses, suburban railways, and even toll and parking charges, eliminating the need for multiple cards.
- **Contactless transactions:** Equipped with Near Field Communication (NFC) technology, the NCMC allows for tap-and-go payments, speeding up the transaction process. **So, statement 1 is correct.**
- **Offline transaction capability:** For low-value transactions, the card supports offline payments, reducing dependency on network connectivity for payments. **So, statement 2 is correct.**
- **Multi-purpose use:** Beyond transportation, the card can be used for retail purchases, making it a versatile tool for daily use.

Q 43. Consider the following:

1. Simplifying tax code
2. Increasing tax rate
3. Implementing a proportional tax system

How many of the above step/s will NOT increase tax buoyancy in a growing economy?

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

Ans: (a)

Explanation:

- Making the tax code simpler can improve compliance rates and reduce the administrative burden on taxpayers and the government, leading to higher tax buoyancy as it becomes easier for more people to contribute their fair share relative to economic growth. **So, 1 will increase tax buoyancy.**
- While targeting high-income earners with higher tax rates might seem like a way to increase revenue, it's not inherently adverse to tax buoyancy. If the economy is growing and high-income earners' incomes are growing proportionally, this could still result in buoyant tax revenue, although it might also depend on the specifics of the economy and tax compliance. **So, 2 will increase tax buoyancy.**
- A proportional tax system could flatten the responsiveness of tax revenue to economic growth, especially if higher-income individuals' earnings grow faster than those of lower-income individuals. **So, 3 will not increase tax buoyancy.**

So, option (b) is correct.

Q44. Consider the following:

Assertion (A): Stagflation is the simultaneous appearance in an economy of slow growth, low unemployment, and rising prices.

Reason (R): In general, the stage is set for stagflation when a supply shock occurs.

- (a) A and R are correct and R is the correct explanation of A
- (b) A and R are correct and R is not the correct explanation of A
- (c) A is incorrect but R is correct
- (d) Both A and R are incorrect

Ans: (c)

Explanation:

- Stagflation is the simultaneous appearance in an economy of slow growth, high unemployment, and rising prices. Policy solutions for slow growth tend to worsen inflation, and vice versa. That makes stagflation hard to fight. **Hence, Assertion is incorrect.**
- In general, the stage is set for stagflation when a supply shock occurs. This is an unexpected event, such as a disruption in the oil supply or a shortage of essential parts. Such a shock occurred during the COVID-19 pandemic with a disruption of the flow of semiconductors that slowed the production of everything from laptops to cars and appliances. Such a shock can affect all of the factors that make up stagflation: inflation, employment, and economic growth. **Hence, Reason is correct.**

So, option (c) is correct.

Q 45. Which of the following best describes the term 'Fully Accessible Route' introduced by RBI?

- (a) Investment route for non-residents to invest in specified government securities without any investment ceilings.
- (b) Investment route for non-residents to invest in specified government securities with certain investment ceilings.
- (c) Investment route for non-residents to invest in all government securities with investment ceilings.
- (d) Investment route for Foreign Portfolio Investors (FPIs) to undertake long-term investments in Indian debt markets.

Ans: (a)

Explanation:

- Reserve Bank of India (RBI) has introduced a separate channel called "Fully Accessible Route (FAR)" to enable non-residents to invest in specified Government of India dated securities. 'Specified securities' shall mean Government Securities as periodically notified by the Reserve Bank for investment under the FAR route. FPI consists of securities and other financial assets passively held by foreign investors. Non-Resident investors can invest in specified government securities without being subject to any investment ceilings. **So, option (a) is correct.**

Q 46. Consider the following statements with respect to various investment routes in India:

1. Medium Term Framework investment route is for Foreign Portfolio Investors in Central Government Securities only.
2. Voluntary Retention Route encourages Foreign Portfolio Investors to undertake long-term investments in Indian debt markets.

Which of the above statements is/ are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect.** The Medium-Term Framework (MTF) investment route is for Foreign Portfolio Investment (FPI) in Central Government Securities (G-secs) and State Government Securities (SDLs).
- **Statement 2 is correct.** VRR is a scheme introduced by the RBI to encourage Foreign Portfolio Investors (FPIs) for long-term investments in Indian debt markets. It Requires a minimum retention period of three years, with FPIs maintaining a minimum of 75% of the allocated amount in India. Investment limits are available on tap and allotted by Clearing Corporation of India Ltd. (CCIL) on a 'first come first served' basis.

Q 47: Consider the following:

1. Mining Rights or License
2. Environmental Clearances (ECs)
3. Forest Clearances (FCs)
4. Wildlife Clearances (WCs)

How many of the above types of clearances can be obtained using the PARIVESH Portal?

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

Ans: (c)

Explanation:

- PARIVESH is a web based, role based, G2C and G2G workflow application that are developed for online submission and monitoring of the proposals submitted by the user agencies for seeking forests, environment and wildlife clearances.
- It automates the entire tracking of proposals which includes online submissions of a new proposal, editing/updating the details of proposals and displays status of the proposals at each stage of the workflow.

Four types of clearances can be obtained using PARIVESH, i.e.,

- Environmental Clearances (ECs),
- Forest Clearances (FCs),
- Wildlife Clearances (WCs)
- Coastal Regulatory Zone Clearances (CRZ).

So, option (c) is correct

Q 48. With reference to the recently launched 'National Logistics Policy,' consider the following statements:

1. It has been formulated by the Ministry of Road Transport and Highways.
2. It has been launched to replace the PM Gati Shakti National Master Plan (NMP).

Which of the statements given above is/are correct?

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

Ans: (d)

Explanation:

- **Statement 1 is incorrect:** The Ministry of Commerce & Industry has launched the National Logistics Policy.
- **Statement 2 is incorrect:** In general, logistics refers to facilities that are vital to trade:
 - Transportation services for the movement of goods;
 - Storage facilities, which are especially important for trade in perishable goods like food, fruits, and vegetables;
 - Efficient operation of government services that support trade, like customs and licensing.
- The National Logistics Policy aims to improve efficiency in human resources and logistics services through the adoption of appropriate technologies, skill development, regulatory framework streamlining, mainstreaming of logistics in higher education, and process streamlining.
- The **PM Gati Shakti National Master Plan (NMP)** is enhanced by the National Logistics Policy.

Q 49. With reference to term 'Shrinkflation', consider the following statements:

1. It is the practice of lowering the size of a product while keeping the same price.
2. It leads consumers to believe that the brands they buy are unaffected by inflation.
3. It makes it more difficult to effectively assess price fluctuations or inflation.

How many of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** Shrink inflation occurs when a product reduces its quantity while keeping the price constant. It occurs when manufacturers shrink products to meet increased production costs while keeping retail prices the same.
- **Statement 2 is correct:** Shrinkflation leads consumers to believe that the brands they buy are unaffected by inflation because container and vessel sizes are lowered by modest amounts. Shrinkflation happens when the materials needed to create things become more expensive, combined with increasing market competition.
- **Statement 3 is correct:** Shrinkflation can lead to customer frustration and deterioration of consumer sentiment towards a producer's brand. In the event of shrinkflation, it is more difficult to accurately measure price changes or inflation.

Q 50. The National Means-cum-Merit Scholarship (NMMS) Scheme is an initiative of the:

- (a) Ministry of Education
- (b) Ministry of Minority Affairs
- (c) Ministry of Social Justice and Empowerment
- (d) Ministry of Women and Child Development

Ans: (a)

Explanation:

- Ministry of Education has approved the continuation of Central Sector National Means-cum-Merit Scholarship (NMMSS) over the 15th Finance Commission cycle for a period of five years i.e. from 2021-22 to 2025-26. Under the 'National Means-cum-Merit Scholarship Scheme' scholarships are awarded to meritorious students of economically weaker sections to arrest their drop out at class VIII and encourage them to continue their education at secondary stage

Q 51. Performance grading index is released by:

- (a) NITI Aayog
- (b) Ministry of Statistics and Program Implementation
- (c) BUREAU OF ENERGY EFFICIENCY
- (d) Ministry of Education

Ans: (d)

Explanation:

- Department of School Education & Literacy, Ministry of Education, devised Performance Grading Index (PGI) for States and UTs which assesses the performance of school education system at the State/UT level by creating an index for comprehensive analysis

Q 52. With reference to the Betelgeuse star, consider the following statements:

1. It is a red supergiant star with a distinctive orange-red hue.
2. It is a tenth-brightest star in the night sky

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statements 1 is correct:** Betelgeuse star is a red supergiant star with a distinctive orange-red hue. In Indian astronomy, Betelgeuse is called 'Thiruvathirai' or 'Ardra' It can be easily spotted in the constellation Orion.
- **Statement 2 is correct:** It is usually the tenth-brightest star in the night sky and, after Rigel, the second-brightest in the constellation of Orion. It is a distinctly reddish, semiregular variable star whose apparent magnitude, varying between +0.0 and +1.6, has the widest range displayed by any first-magnitude star.

https://economictimes.indiatimes.com/news/international/us/betelgeuse-star-shows-unexpected-behavior-raises-many-questions/articleshow/100975228.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Q 53. With reference to Solar Ultraviolet Imaging Telescope (SUIT), consider the following statements:

1. It is developed by Pune's Inter-University Center for Astronomy and Astrophysics (IUCAA).
2. It is designed to investigate the sun's ultraviolet (UV) radiation and obtain high-quality photographs of the sun's atmosphere at different UV
3. The telescope is set to be integrated with the ADITYA-L1 mission.

How many of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** The development of SUT involved a collaborative effort under the leadership of the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune.
- **Statement 2 is correct:** SUT will study the Sun's ultraviolet (UV) emissions and capture high-resolution images of the Sun's atmosphere in various UV wavelengths. SUT captures images of the Sun's photosphere and chromosphere in this wavelength range using various scientific filters.
- **Statement 3 is correct:** The telescope is set to be integrated with the ADITYA-L1 mission.

Q 54. With reference to the Rainbow Diet Campaign, consider the following statements:

1. The campaign has been launched by ICAR-Central Tuber Crops Research Institute.
2. The primary goal of the campaign is to promote biofortified tubers and value-added goods.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct.** Rainbow Diet Campaign has been launched by ICAR-Central Tuber Crops Research Institute (CTCRI). The CTCRI would launch the campaign in Odisha in the current fiscal, and, by the end of 2024-25,
- **Statement 2 is correct:** The objective of the initiative is to raise awareness among tribal communities about biofortified tubers and value-added products made from them in order to combat hunger and ensure a balanced diet. A typical 'rainbow diet' is a meal plan that includes various coloured fresh fruits and vegetables. The CTCRI's tuber crop-based rainbow diet is popularizing the orange-fleshed sweet potato (high in beta-carotene), purple-fleshed sweet potato, and purple-fleshed yam (high in anthocyanin).

Q 55. With reference to the Zero Shadow Day, consider the following statements:

1. It is a phenomenon when the sun's rays hit a specific spot on the earth that is perpendicular to the surface.
2. For places between tropics of Cancer and Capricorn, zero shadow day will occur twice a year.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** 'Zero Shadow Day' is when vertical objects appear to throw no shadows. It is a sub-solar point where the sun is directly overhead at a given latitude. When the sun reaches its zenith (the highest point in the sky), its rays strike a specific point that is exactly perpendicular to the surface. This will cast a person's shadow directly beneath him, giving the impression that there are no shadows.
- **Statement 2 is correct:** Every year, in May and July/August, there are two zero shadow days that are noticed at places between the tropics of Capricorn and Cancer. One occurs during the Sun's northward movement, Uttarayan, and the other occurs during its southern movement, Dakshinayan.

Q 56. With reference to the Vibrant Village Programme, consider the following statements:

1. The government has approved it as a central sector scheme.
2. The program aims to improve the quality of life for individuals living in border communities.
3. The plan intends to promote cultural and traditional knowledge and legacy in border regions.

How many of the above statements is/are correct?

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

Ans: (b)

Explanation

- **Statement 1 is incorrect:** Government has approved Vibrant Villages Programme (VVP) as a Centrally Sponsored Scheme for comprehensive development of the select villages in 46 blocks in 19 districts of abutting northern border in the States of Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand and UT of Ladakh
- **Statement 2 is correct:** The aims of the scheme are to identify and develop the economic drivers based on local, natural, human and other resources of the border villages. Development of growth centres on the "Hub and Spoke Model" through promotion of

social entrepreneurship, empowerment of youth and women through skill development is also one of the objectives of VVP.

- **Statement 3 is correct:** Moreover, the programme also intends to leverage tourism potential through promotion of local, cultural, traditional knowledge and heritage in the border areas, thus increasing the employment opportunities of the people and, as a result, stemming migration. Development of sustainable eco-agribusinesses on the concept of “One Village-One product” through community-based organisations, cooperatives, SHGs, NGOs etc is also aimed at

<https://pib.gov.in/PressReleaselframePage.aspx?PRID=1942876>

Q 57. With reference to the Automated Permanent Academic Account Registry, consider the following statements:

1. It is part of the ‘One nation, One Student ID
2. It is an education ecosystem registry system known as 'EduLocker'.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** ‘Automated Permanent Academic Account Registry (APAAR)’ is part of the ‘One nation, One Student ID’ initiative stemming from the NEP 2020.
- **Statement 2 is correct:** The APAAR ID is an education ecosystem registry system known as 'EduLocker' for students in all states of India. It will digitally record academic credentials, credit scores, certificates, and other academic information for students ranging from pre-primary to higher education.
- **Statement 3 is correct:** The APAAR program aims to develop a unified educational system, improve security, and make academic data more available to students. Students must acquire parental consent before enrolling in the APAAR ID system.

<https://apaar.education.gov.in/about>

Q 58. Global Report on Food Crises is prepared by:

- (a) Food and Agriculture Organization
- (b) UNDP
- (c) World Bank
- (d) Food Security Information Network

Ans: (d)

Explanation:

Q 59. With reference to the LiDAR, consider the following statements:

1. It is a remote sensing method that uses light in the form of a pulsed laser to measure ranges to the Earth
2. It detects pollutants such as carbon dioxide, sulfur dioxide, and methane particles.
3. It may generate a 3D topographical map of a certain location.

How many of the above statements is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** Lidar, which stands for Light Detection and Ranging, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.
- **Statement 2 is correct:** LiDAR wavelengths are shorter. It functions in the ultraviolet, visible, and near-infrared regions. This aids in imaging stuff that matches or exceeds the wavelength. LiDAR can detect pollutants such as carbon dioxide, sulfur dioxide, and methane.
- **Statement 3 is correct:** LiDAR can be used to generate a 3D topographic map of a specific area.

<https://phys.org/news/2023-10-nasa-lidar-tech-exploration.html>

Q 60. Consider the following statements regarding the PSLV Orbital Experimental Module-3 (POEM-3):

1. The POEM concept was developed and implemented by Vikram Sarabhai Space Center (VSSC).
2. It aims to achieve zero debris in the earth's orbit.

Which of the above given statements is/are correct?

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

Ans: (c)

Explanation:

- The PSLV-C58 Mission, involved deploying all satellites into their predetermined orbits. Following this main objective, the final stage of the PSLV rocket was converted into a stabilised platform, known as POEM-3, by employing a 3-axis stabilization technique.

- **Statement 1 is correct:** The Vikram Sarabhai Space Centre (VSSC) played a pivotal role in the development and implementation of the POEM concept by enhancing the fourth stage of the PSLV rocket.
- **Statement 2 is correct:** ISRO's PSLV Orbital Experimental Module-3 (POEM-3) Mission re-entered the Earth's atmosphere without leaving any debris in orbit.

Q 61. Consider the following pairs:

List I	List II
1. Chandrayaan-3	Nari Shakti Point
2. Chandrayaan-2	Jawahar Point
3. Chandrayaan-1	Tiranga Point

How many of the above given pairs is/are correctly matched?

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

Ans: (d)

Explanation:

- **Pair 1 is incorrect:** On August 28 2023, the Prime Minister of India announced that the landing point of the Chandrayaan-3 Mission would be known as "Shiv Shakti Point".
- **Pair 2 is incorrect:** While the Chandrayaan-2 landing failure spot (lander Vikram crashed) will be called "Tiranga point".
- **Pair 3 is incorrect:** Chandrayaan-1's moon impact probe (MIP) touched the lunar surface on Nov 14, 2008. The site was called "Jawahar Point" or "Jawahar Sthal".

Q 62. Consider the following statements regarding the United Nations Security Council (UNSC):

1. It is the principal organ responsible for maintaining international peace and security.
2. The UNSC consists of ten permanent members and five non-permanent members elected by the General Assembly.
3. The UNSC presidency operates on a rotational basis, with each member serving as the Council's president for a one-year term.

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

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** The UNSC is indeed the principal organ responsible for maintaining international peace and security.
- **Statement 2 is incorrect:** The UNSC consists of fifteen members, with five permanent members (China, France, Russia, United Kingdom, United States) and ten non-permanent members elected by the General Assembly for two-year terms.
- **Statement 3 is incorrect:** The UNSC presidency rotates monthly among its members, not annually. Each of the fifteen members of the UNSC, including the five permanent members and the ten non-permanent members, holds the presidency for one month in alphabetical order based on the English translation of their country's name.

Q 63. Consider the following statements regarding Tuberculosis (TB):

1. TB is caused by a virus that primarily affects the lungs.
2. The theme of World TB Day 2024 is "Invest to End TB Save Lives".
3. Directly Observed Treatment, Short-Course (DOTS) is a strategy recommended by the World Health Organization (WHO) for TB control.

Which of the statements given above is/are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is incorrect:** Tuberculosis is caused by a bacterium called *Mycobacterium tuberculosis*, not a virus.
- **Statement 2 is incorrect:** World TB Day 2024 Theme: "Yes! We can end TB!"
- The celebration of World TB Day began in 1982, on the 100th anniversary of Dr. Robert Koch's announcement of the discovery of *Mycobacterium tuberculosis*, the bacteria that causes TB.
- World TB Day, emphasizes the potential to eradicate TB with existing disease control mechanisms, infrastructure, training, and political will.
- **Statement 3 is correct:** Directly Observed Treatment, Short-Course (DOTS) is a strategy recommended by the World Health Organization (WHO) for TB control, emphasizing supervised administration of anti-TB medication.

Q 64. With which regions does the Nimmu-Padam-Darcha Road connects, marking its strategic significance?

- (a) Jammu & Kashmir and Ladakh
- (b) Himachal Pradesh and Uttarakhand
- (c) Ladakh and Himachal Pradesh
- (d) Uttarakhand and Jammu & Kashmir

Ans: (c)

Explanation:

- The Nimmu-Padam-Darcha Road, connecting Manali in Himachal Pradesh to Leh in Ladakh via Darcha and Nimmu on the Kargil-Leh highway. The Nimmu-Padam-Darcha Road in Ladakh, which is strategically significant, connects several key places in Himachal Pradesh.
- Manali: The road starts from Manali, a popular hill station and tourist destination in Himachal Pradesh. Manali serves as a gateway to Ladakh and other regions in the Indian Himalayas.
- Keylong: Keylong is the administrative center of the Lahaul and Spiti district in Himachal Pradesh. It lies along the Nimmu-Padam-Darcha Road route and serves as a significant stopover for travelers.
- Darcha: Darcha is a small village located in the Lahaul region of Himachal Pradesh. It is a key point along the Nimmu-Padam-Darcha Road and acts as a base for travelers heading towards Ladakh.
- Shinkun La Pass: Although not in Himachal Pradesh, the Shinkun La Pass is a crucial point along the road. It marks the highest point on the route, located at an elevation of 16,558 feet (5,044 meters). This pass connects the Lahaul region of Himachal Pradesh with the Zaskar region of Ladakh.

Q 65. Consider the following statements regarding the World Water Day:

1. It is observed annually by the United Nations on 22 March.
2. This day plays a crucial role in promoting action on Sustainable Development Goal 6 (SDG 6).
3. The theme of World Water Day 2024 is 'Sustainable Drinking Water '.

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

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

Ans: (b)

Explanation:

- **Statement 1 is correct:** World Water Day is an annual United Nations Observance – held on 22 March – focusing on the importance of freshwater, coordinated by UN-Water.
- **Statement 2 is correct:** World Water Day plays a crucial role in promoting action to ensure everyone has access to safe, affordable drinking water by 2030, as set out in Sustainable Development Goal 6 (SDG 6).
- **Statement 3 is incorrect:** The theme of World Water Day for the year 2024 is 'Leveraging Water for Peace' collaborating to solve water-related issues creates positive outcomes and builds resilience to shared challenges.

Q 66. Consider the following statements regarding the “Order of the Druk Gyalpo”:

1. It is the highest award of Nepal.
2. Prime Minister of India is the first foreign leader to be given this prestigious award.

Which of the above given statements is/are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is Incorrect:** Order of the Druk Gyalpo, Bhutan’s highest civilian award, given by His Majesty the King of Bhutan.
- **Statement 2 is correct:** Prime Minister of India Shri Narendra Modi is the first foreign leader to be given this prestigious award.

Some other famous awards to current Prime Minister of India

Award	Country	Date	Important Information
Legion of Honour	France	14 July 2023	Grand Cross, the highest civilian honour of France
Legion of Merit	United States	21 December 2020	Chief Commander, the highest degree of the Legion of Merit
Order of Zayed	United Arab Emirates	4 April 2019	The Highest civilian honour of the United Arab Emirates.
Order of St. Andrew	Russia	12 April 2019	Grand Cross with Collar, the highest civilian honour of Russia.

Q 67. Which organization is known for releasing the World Inequality Report that provided the first estimates of the gender inequality in global earnings?

- (a) World Economic Forum (WEF)
- (b) World Bank (WB)
- (c) UNDP
- (d) None of the above

Ans: (d)

Explanation:

- The World Inequality Lab (WIL) is a research center in Paris that studies income and wealth inequality worldwide. Their goal is to use data to promote social and economic justice. They maintain a global database on wealth and income (World Inequality

Database) and publish research on how inequality has changed over time, focusing on both differences between countries and within them.

Q 68. India's economic growth is accompanied by rising income and wealth inequality. This trend could MOST LIKELY lead to:

1. Increased social mobility and a stronger middle class.
2. Reduced social unrest and greater political stability.
3. Slower economic growth due to decreased consumption.
4. Improved investment in human capital for all income groups.

Select the correct answer using the code given below:

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect:** Increased social mobility and a stronger middle class: This is unlikely because rising inequality creates barriers for social mobility, making it harder for people from poor backgrounds to improve their economic standing.
- **Statement 2 is incorrect:** Reduced social unrest and greater political stability: This is the opposite of what's expected. A large gap between rich and poor can lead to social tensions and instability.
- **Statement 3 is correct:** Slower economic growth due to decreased consumption: When a large portion of the population has low income, they have less money to spend, potentially slowing economic growth. This is the most likely consequence.
- **Statement 4 is incorrect:** Improved investment in human capital for all income groups: This is not a guaranteed outcome. In fact, high inequality might lead to less investment in education and healthcare for the poor.

Q 69. With reference to the history of India, consider the following pairs:

Important Site	Present State
1. Dwarasamudra	Maharashtra
2. Bhojshala	Madhya Pradesh
3. Sthanesvara	Uttar Pradesh
4. Girinagar	Gujarat

Which of the pairs given above are correctly matched?

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

Ans: (d)

Explanation:

- **Dwarasamudra:** This historical site is associated with the Hoysala Empire and is located in Karnataka, not Maharashtra. So, pair 1 is incorrect.
- **Bhojshala:** Bhojshala is indeed located in Madhya Pradesh, so pair 2 is correctly matched.
- **Sthanesvara:** The correct present state for Sthanesvara is not Uttar Pradesh but Gujarat. So, pair 3 is incorrect.
- **Girinagar:** There is a historically significant site named Girinagar in Gujarat. So, pair 4 is correct.

Q 70. Consider the following statements:

1. National Zoological Park in Delhi is governed by the Wildlife (Protection) Act, 1972.
2. On 21st March, the International Day of Forest is observed to raise awareness.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** National Zoological Park Delhi is governed by the Wildlife (Protection) Act, 1972.
- **Statement 2 is correct:** On March 21st, 2024, International Day of Forests was celebrated at the National Zoological Park, New Delhi (Delhi Zoo). The aim of this event is to raise awareness among visitors about the significance of plants and their role in our lives.

Q 71. Consider the following:

1. Cadmium
2. Chromium
3. Lead
4. Gold

How many of the above is/are found in e-waste?

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

Ans: (d)

Explanation:

- E-waste is electronic products that are unwanted, not working, and nearing or at the end of their “useful life. Health problems associated with e-waste include contact with hazardous substances like **lead, cadmium, chromium, brominated flame retardants**, and polychlorinated biphenyls (PCBs), inhalation of toxic fumes, and chemical accumulation in soil, water, and food. In addition to its hazardous components, when processed, **e-waste can produce a number of harmful byproducts that can harm human health.** Furthermore, recycling operations such as removing electrical equipment could create a higher risk of damage. Gold is also present in E- waste through in limited amount.
- So, option **(c)** is the correct answer.

Q 72. With reference to the “Trade Records Analysis of Flora and Fauna in International Commerce (TRAFFIC)”, consider the following statements:

1. It is a wildlife trade monitoring network developed by the United Nations Framework Convention on Climate Change
2. As, per recent analyzing by TRAFFIC, Tamil Nadu accounted for more than 60% of the country illegal trade in Shark.

Which of the statements given above is/are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect:** TRAFFIC is a wildlife trade monitoring network established in 1976 and headquartered in the United Kingdom. It was established as a collaborative initiative by the WWF and the International Union for Conservation of Nature.

- **Statement 2 is correct:** 2. As, per recent analyzing by TRAFFIC, Tamil Nadu accounted for more than 60% of the country illegal trade in Shark. A TRAFFIC priority is to promote international cooperation to address wildlife trade issues, with particular emphasis on CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and CBD, the Convention on Biological Diversity.

Q 73. With reference to Microplastics, consider the following statements:

1. Plastic pieces that are less than 5mm in length are called microplastics.
2. They can be accumulated in planktonic and invertebrate aquatic creatures.
3. Raman spectroscopy is a technique that can be used to detect them.

How many of the above statements is/ are correct?

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

Ans:(c)

Explanation:

- **Statement 1 is correct:** Microplastics are plastics smaller than 5 mm. The production of synthetic plastics derived from fossil fuels is growing quickly, but insufficient plastic waste treatment has recently led to several pollution-related problems. Microplastics stay in the environment for extended periods and may absorb other pollutants.
- **Statement 2 is correct:** Microplastics can accumulate in planktonic and invertebrate aquatic creatures. The microplastics are then transmitted to the food chain, where they have detrimental effects on the flora and wildlife.
- **Statement 3 is correct:** A vibrational spectrum containing information about a system's molecular vibrations can be obtained by Raman spectroscopy, a vibrational spectroscopy method based on the inelastic scattering of light. When it comes to disease, cell death, differentiation, and interactions with medications or other harmful substances, Raman micro-spectroscopy can offer valuable biochemical insights into live cells. Raman spectroscopy is a technology that can be used to identify microplastics and harmful substances.

Q 74. With reference to the Red Sanders, consider the following statements:

1. It can only be found in the Seshachalam hills of the southern Indian state of Andhra Pradesh
2. It is listed in 'Endangered' category in the International Union for Conservation of Nature's (IUCN) Red List.
3. It is also listed in Appendix-II of the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES).

How many of the above statements is/ are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** Red Sanders is native and endemic to India and can only be found in the Seshachalam hills of the southern Indian state of Andhra Pradesh
- **Statement 2 is correct:** Red Sanders is a flora-species and fall under 'endangered list' in the International Union for Conservation of Nature (IUCN) Red List.
- **Statement 3 is correct:** Red Sanders is also listed in Appendix-II of the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES).

Q 75. With reference to the 'Algal bloom', consider the following statements:

1. It is a rapid increase in the population of algae in freshwater or marine water systems.
2. It is often recognized by the discoloration in the water from the algae's pigments.
3. They are more likely to occur in the colder regions of the world.

How many of the above statements is/ are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is correct:** An algal bloom or algae bloom is a rapid increase or accumulation in the population of algae in freshwater or marine water systems.
- **Statement 2 is correct:** An algal bloom (HAB) occurs when toxin-producing algae grow excessively in a body of water. The excessive algal growth, or algal bloom, becomes visible to the naked eye and can be green, blue-green, red, or brown, depending on the type of algae. Hence It is often recognized by the discoloration in the water from the algae's pigments.
- **Statement 3 is incorrect:** Blooms usually develop during the warmer months of the year when water temperatures are higher. Cyanobacteria prefer warmer water and have a competitive advantage over other algae at temperatures over 25°C.

Q 76. Chinnar Wildlife Sanctuary is situated in which of the following state?

- (a) Andra Pradesh
- (b) Odisha
- (c) Kerala
- (d) Rajasthan

Ans: (c)

Explanation:

- Chinnar Wildlife Sanctuary is located in Munnar, within the Kanthalloor and Marayoor Panchayat borders of Kerala's Idukki District.
- **So, option (c) is correct**

Q 77. With reference to the Hydrogen fuel cell electric vehicles, consider the following statements:

1. They are bulkier than vehicles powered by lithium-ion batteries.
2. Charging them takes a longer time than it does for EVs powered by lithium-ion batteries.

Which of the statements given above is/are correct?

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

Ans: (d) ★

Explanation

- **Statement 1 is incorrect:** Hydrogen has a low volumetric energy density, making onboard storage of sufficient amounts problematic in terms of weight, volume, kinetics, safety, and cost. Only at very low temperatures, under high pressure, or in metal-hydride systems designed to maximize volumetric energy density can hydrogen be kept as a liquid.
- **Statement 2 is incorrect:** A standard electric vehicle can be fully charged in just over six hours; however, an FCEV can be refuelled in five minutes and have a range of over 350 miles. A small quantity of hydrogen can go a long way.

Q 78. Consider the followings:

1. Plague
2. Leprosy
3. Smallpox
4. Kala Azar

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how many of the above disease has/have been almost eradicated in India?

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

Ans: (d)

Explanation:

- India consistently organizes campaigns and introduces immunization schemes. Therefore, illnesses such as smallpox, leprosy, and plague have been totally eradicated in India. Between 2007 and 2022, kala-azar cases in India decreased by 98.7%, from 44,533 to 834, and 632 endemic blocks (99.8%) in Bihar, Uttar Pradesh, Jharkhand, and West Bengal were declared eliminated (less than one case per 10,000). Kala Azar is not totally eradicated from India.
- Leproxy mukt BHARAT by 2047. Currently, prevalence rate of leproxy in India is .45/10000 population.
- Kala Azar, we have achieved target of one or less than one case per 10000. lesser number of cases are reportedly annually in the country.
- So, option (c) is correct

Q 79. With reference to green hydrogen, consider the following statements:

1. It is a fuel that can be blended with natural gas to provide power or heat.
2. Green Hydrogen only emits water vapor as residue.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation

- **Statement 1 is correct:** Hydrogen produced through clean pathways can be injected into natural gas pipelines, and the resulting blends can be used to generate heat and power with lower emissions than using natural gas alone. Blend limits depend on the design and condition of current pipeline materials, of pipeline infrastructure equipment, and of applications that utilize natural gas.
- **Statement 2 is correct:** Green Hydrogen only emits water vapor as residue. Fuel cell electric vehicles (FCEVs) are hydrogen-powered. They are more efficient than traditional internal combustion engine vehicles and create no toxic exhaust emissions, merely water

vapor and warm air. Unlike other electric vehicles, FCEVs generate electricity using a fuel cell fuelled by hydrogen, rather than pulling electricity from just a battery.

Q 80. With reference to the “Liquid Apogee Motor (LAM), consider the following statements:

1. It is developed by the National Aeronautics and Space Administration.
2. It is designed to provide the final boost to a satellite's orbit.
3. As a propellant, it uses mono-methyl hydrazine (MMH) and mixed oxides of nitrogen (MON3).

How many of the above statements is/ are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect:** Liquid Apogee Motor (LAM) is Developed by the Liquid Propulsion Systems Centre (LPSC), the ISRO Centre for Liquid and Cryogenic Propulsion in Thiruvananthapuram. LAM's successful operation is crucial for ISRO's Aditya spacecraft's halo orbit at Lagrangian point L1, and is frequently utilized in satellite missions to maintain satellite position and trajectory
- **Statement 2 is correct:** Liquid Apogee Motor (LAM) is type of rocket engine that is specifically designed to provide the final boost to a satellite's orbit
- **Statement 2 is correct:** The LAM engine uses mono-methyl hydrazine (MMH) and mixed oxides of nitrogen (MON3) as propellants.

Q 81. With reference to the Double Asteroid Redirection Test (DART) Mission, consider the following statements:

1. It is a joint mission of NASA and the Indian Space Research Organization.
2. This is the first demonstration of using a kinetic impactor to alter an asteroid's motion in space.

Which of the statements given above is/are correct?

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

Ans: (b)

Explanation

- **Statement 1 is incorrect:** The Double Asteroid Redirection Test (DART) was a NASA space mission aimed at testing a method of planetary defense against near-Earth objects (NEOs). It was designed to assess how much a spacecraft impact deflects an asteroid through its transfer of momentum when hitting the asteroid head-on.
- **Statement 2 is correct:** DART is a low-cost spacecraft and is the first demonstration of the kinetic impactor technique to change the motion of an asteroid in space.

Q 82. With reference to the “STARFIRE Algorithm”, consider the following statements:

1. It was developed by Raman Research Institute (RRI).
2. It has the ability to estimate radio frequency interference

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** STARFIRE stands for "Simulation of Terrestrial Radio Frequency Interference in Earth's Orbits." Scientists at the Raman Research Institute (RRI), an autonomous institute of the Department of Science and Technology, created an algorithm known as STARFIRE.
- **Statement 2 is correct:** STARFIRE stands can estimate the Radio Frequency Interference emitted by FM radio stations, Wi-Fi networks, mobile towers, radar, satellites, and communication devices, and use this calculation for designing and fine-tuning the antennas

Q 83. Consider the following statements regarding the ‘World Purple Day’:

1. It is an international effort dedicated to increasing awareness about epilepsy worldwide.
2. India officially recognizes March 26th as Purple Day in 2016.
3. Cassidy Megan created the idea of Purple Day in 2008.

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

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

Ans: (b)

Explanation:

Every year March 26 is observed as World Purple Day, also known as Epilepsy Awareness Day. Epilepsy is a condition where the nerve cell activity in the brain is disrupted, which further causes seizures

- **Statement 1 is correct:** Purple Day is an international grassroots effort dedicated to increasing awareness about epilepsy worldwide.
- **Statement 2 is incorrect:** Canada is the only country in the world that officially recognizes March 26th as Purple Day through the Purple Day Act implemented on June 28, 2012.
- **Statement 3 is correct:** A 9-year-old Canadian girl Cassidy Megan created the idea of Purple Day in 2008, motivated by her own struggles with epilepsy.

Q 84. Consider the following statements regarding the Abel Prize 2024:

1. It was awarded to the French mathematician Luis Caffarelli.
2. The prize cannot be awarded to more than three individuals in a single year.
3. The prize is managed by the Norwegian Academy of Science and Letters.

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

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

Ans: (b) ★

Explanation:

- **Statement 1 is incorrect:** The Norwegian Academy of Science and Letters announced the Abel Prize 2024 to Michel Talagrand. Argentine-American mathematician Luis Caffarelli received the award in 2023.
- **Statement 2 is correct:** The Prize may be awarded to one or several people, but not to institutions or groups, and not more than three individuals.
- **Statement 3 is correct:** The prize was established by the Norwegian Government in 2002 and is managed by The Norwegian Academy of Science and Letters on behalf of the Norwegian government.
 - The Norwegian Academy of Science and Letters, founded in 1857, is a non-governmental, nationwide body which embraces all fields of science to support the advancement of science and scholarship in Norway.

Q 85. Consider the following statements regarding the India Employment Report 2024:

1. The report says that the Female labor force participation rate (LFPR) remains among the lowest globally.
2. According to the report, the proportion of educated youths among the unemployed has doubled from the year 2000 to 2022.

3. It is published annually by the Ministry of Labor and Employment.

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

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

Ans: (b)

Explanation:

- **Statement 1 is correct.** The India Employment Report 2024 offers insights into the employment landscape of the country, including factors influencing job creation and employment patterns. Female labor force participation rate (LFPR) remains among the lowest globally. Although there has been a recent increase in female LFPR, a considerable gender gap persists, with women's LFPR at 32.8% in 2022, significantly lower than men's LFPR at 77.2%.
- **Statement 2 is correct:** India's youth constitute a significant portion, almost 83%, of the unemployed workforce. Notably, the proportion of educated youths among the unemployed has doubled from 35.2% in 2000 to 65.7% in 2022, indicating challenges in matching skills with job opportunities.
- **Statement 3 is incorrect.** The India Employment Report is typically released by various research organizations or think tanks, rather than by the Ministry of Labor and Employment. India Employment Report is a joint publication by the Institute for Human Development and the International Labour Organization (ILO).

Q 86. Consider the following statements regarding same-sex marriage:

1. Thailand announced thereby become the first country in Southeast Asia to legalize same-sex marriage.
2. Vietnam legalized it in 2019, becoming the first place in Asia to do so.

Which of the statements given above is/are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** Thailand about to become the first country in Southeast Asia to legalize same-sex marriage.
- **Statement 2 is incorrect:** Taiwan: Legalized same-sex marriage in 2019, becoming the first place in Asia to do so. Nepal: Established legal recognition for same-sex couples

through civil unions in 2008, but not full marriage rights. Vietnam: No legal recognition of same-sex marriage or unions, but growing social acceptance. Singapore: Sodomy laws repealed in 2014, but same-sex marriage not recognized.

Q 87. Consider the following statements regarding the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS):

1. It guarantees 100 days of wage employment per year to every rural household whose adult members volunteer to do unskilled manual work.
2. The scheme was launched in 2015 and covers all rural districts of India.
3. Adult members (minimum 25 years old) of a registered household can apply for work.

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

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** MGNREGS guarantees 100 days of wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.
- **Statement 2 is incorrect:** The scheme was launched in 2005 and covers all rural districts of India.
- **Statement 3 is incorrect:** The primary aim of MGNREGS is to enhance the livelihood security of people in rural areas by guaranteeing wage employment, thereby addressing issues of poverty and unemployment. All rural households are eligible to register under MGNREGS. Any adult member (above 18 years old) of a registered household can apply for work.

Q 88. Consider the following statements:

1. Indigo plant grows primarily in tropical climate whereas most of the west European countries have temperate climates.
2. Indian Indigo had a rich blue colour, whereas the dye from other plants was pale and dull.
3. Indigo imported from India was cheaper for Europeans in comparison to dye obtained from other plants.

Which of the above are the reasons for the European cloth manufacturers to be highly dependent on Indigo plantations in India?

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

Ans: (a)

Explanation

- **Statement 1 is correct:** Indian indigo was being used by cloth manufacturers in Italy, France and Britain to dye cloth. The indigo plant grows primarily in the tropics, whereas Italy, France and Britain are temperate countries. Since indigo plantation was not possible in Western European countries.
- **Statement 2 is correct:** Cloth dyers preferred indigo produced in India for dye in comparison to other plants because of its rich blue colour, whereas the dye obtained from other plants in European countries was pale and dull.
- **Statement 3 is incorrect:** Only small amounts of Indian indigo reached the European market and its price was very high in the European market. However, due to the good quality of Indian indigo, European cloth manufacturers were in need to use indigo for dying cloth.

Q 89. With reference to Land Revenue Systems in British India, consider the following statements:

1. Sir Thomas Munro started the mahalwari system in the north-western provinces of Bengal presidency.
2. The Ryotwari system was introduced by Holt Mackenzie in parts of southern India.
3. The introduction of the Permanent Settlement in Bengal improved the fertility and overall condition of the agricultural land.

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

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

Ans (d)

Explanation:

- **Statement 1 is incorrect:** In the North Western Provinces of the Bengal Presidency (most of this area is now in Uttar Pradesh), an Englishman called Holt Mackenzie introduced the new system called the Mahalwari settlement. This new system came into effect in 1822.
- **Statement 2 is incorrect:** The Ryotwari system was introduced by Sir Thomas Munro in 1820. This system allowed the government to deal directly with the peasants (ryot) for revenue collection.
- **Statement 3 is incorrect:** While introducing the Permanent Settlement System, Lord Cornwallis thought that fixing land revenue by the State would allow landholders or Zamindars to earn better returns and they would invest the surplus money in improving the fertility of the land. However, nothing much happened. The amount to be paid by the Zamindars was fixed, in case of any shortfalls due to flood, drought, or other calamity, which led to the sale of the zamindari and fragmentation of the land.

Q 90. Consider the following events:

1. Charles Wood Despatch
2. Santhal Rebellion
3. Establishment of Public Works Department
4. System of Budget was introduced

5. Establishment of Statistical Survey of India

Which of the above events took place during the leadership of Lord Dalhousie as the Governor-General of India?

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

Ans (a)

Explanation

The major events which took place during the reign of Lord Dalhousie as the Governor-General of India are as follows:

- Doctrine of Lapse (1848)
- Second Anglo-Sikh War (1848–1849)
- Bethune Collegiate School (1849)
- Religious Disabilities Act, 1850
- The first telegraph line was laid between Diamond Harbour to Calcutta (1851)
- Second Anglo-Burmese War (1852)
- Charter Act, 1853
- First Passenger train between Bombay and Thane (1853)
- Charles Wood Despatch (1854)
- Post Office Act, 1854
- Establishment of Public Works Department (1854)
- Santhal Rebellion (1855)

The system of Budget was introduced during Lord Canning, while the Statistical Survey of India was established during Lord Mayo.

So, option (a) is correct.

Q 91. With reference to the Swadeshi Movement of Bengal, consider the following statements:

1. The decision to partition the province of Bengal led to this movement.
2. The Ghadar Mutiny took place during this movement.
3. Rabindranath Tagore renounced his knighthood during the movement.

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

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** Lord Curzon decided to divide the Bengal province into two provinces. He prepared a comprehensive plan for the partition of Bengal in 1905. The British Crown approved the partition plan and the province of Bengal was divided into two parts on 16th October 1905. The two parts were named as Western Bengal and Eastern Bengal. Lord Curzon's unpopular decision to partition the province of Bengal, led to the Swadeshi movement of Bengal (1905-1908).

- **Statement 2 is incorrect:** The Ghadar Mutiny was a plan to initiate a pan-India mutiny in the British Indian Army in February 1915 to end the British Raj in India. It is not associated with the Swadeshi Movement.
- **Statement 3 is incorrect:** Rabindranath Tagore was awarded knighthood in 1915 by King George V for his services to Literature. He returned his knighthood in protest against the 1919 Amritsar Massacre.

Q 92. Consider the following pairs:

Delhi Durbars	Organized under which Viceroy
1. First Delhi Durbar	- Lord Lytton
2. Second Delhi Durbar	- Lord Dufferin
3. Third Delhi Durbar	- Lord Curzon

How many of the pairs given above is/are correctly matched?

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

Ans: (a)

Explanation:

- The three Delhi Durbars were held in the years 1877, 1903, and 1911 respectively. The durbars aimed to mark the accession of the British monarch to the title of Empress or Emperor of India. The event involved military processions, elephants, and magnificent carriages, as well as a host of rulers of the Indian princely states paying homage to the British Crown.
- **Pair 1 is correct:** The first Delhi Durbar was held in 1877. It was held under the leadership of Lord Lytton as the viceroy of India.
- **Pair 2 is incorrect:** The second Delhi Durbar was held in 1903. It was held under the leadership of Lord Curzon as Viceroy of India.
- **Pair 3 is incorrect:** Lord Hardinge was the Viceroy during the Delhi Durbar of 1911.

Q 93. The terms “Threema, Zangi and Briar” sometimes mentioned in the news are related to:

- (a) Bitcoins
- (b) Himalyan Rivers
- (c) Mini satellites
- (d) Messenger apps

Ans: (d)

Explanation:

- The term Threema, Zangi and Briar is related to cyber-attack recently India has blocked 14 mobile messenger apps apparently being used by terrorist groups in Jammu and Kashmir to communicate with people in Pakistan.
- The blocked apps are Crypviser, Enigma, Safeswiss, Wickrme, Mediafire, Briar, BChat, Nandbox, Conion, IMO, Element, Second Line, Zangi, and Threema

Q 94. With reference to the “Blue Hole”, consider the following statements:

1. It is a large underwater sinkhole or cavern that forms in an island.
2. The world’s second deepest blue hole is located in the South China Sea

Which of the statements given above is/are correct?

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

Ans: (a)

Explanation:

- **Statement 1 is correct:** A blue hole is a large underwater sinkhole or cavern that forms in an island or bank made of carbonate bedrock, such as limestone or coral reef
- **Statement 2 is incorrect:** The deepest known blue hole of the world, which was discovered in 2016 in the South China Sea and is known as the Dragon Hole, is believed to be more than 980 feet deep. The Mexico blue hole has been named Taam Ja's record largest.

Q 95. With reference to the “ASEAN Digital Ministers (ADGMIN) meeting”, Consider the following statements:

1. It is an annual meeting of telecom ministers of ASEAN countries.
2. India and ADGMIN jointly launched India-ASEAN Digital Work Plan 2023 to co-operate in emerging areas in the field of Information and Communication Technologies.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is incorrect:** The 3rd ASEAN Digital Ministers Meeting (ADGMIN) was held in Boracay Island, Aklan. ADGMIN is an annual meeting of telecom ministers of 10 ASEAN nations and dialogue partners- Australia, Canada, China, EU, India, Japan, USA, UK, South Korea, Russia and New Zealand.
- **Statement 2 is correct:** The Ministers meeting approved the India-ASEAN Digital Work Plan 2023. The workplan includes the capacity building and knowledge sharing in emerging areas in the field of Information and Communication Technologies such as

Artificial Intelligence in Cyber Security, Application of IoT & AI in Next Generation Smart City & Society 5.0, Sustainable Data and Transport Network for Future: Standards and Applications, 5G technologies for IoT and future trends, Role of ICT in implementation of Digital Health and Security protection and assessment for future network, etc.

Q 96. Consider the following statements regarding Henley Passport Index, 2024:

1. It ranks the passports of several countries according to the number of destinations their holders can access without a prior visa.
2. India's rank is 82nd in the index.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- While India has moved up from its spot at the 87th place on the list, its access to countries has decreased by one. India's rank is 82nd in the index.

Q 97. With reference to "SAKSHAM (Stimulating Advanced Knowledge for Sustainable Health Management)", consider the following statements:

1. It is developed by Bharat Biotech under the aegis of the Ministry of Health and Family Welfare.
2. It is a unified platform for providing online training and medical education to all health professionals in the country

Which of the above given statements is/are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect:** SAKSHAM (Stimulating Advanced Knowledge for Sustainable Health Management), a Learning Management Information System (LMIS) of MoHFW. This digital learning platform has been developed by the National Institute of Health & Family Welfare (NIHFW),
- **Statement 2 is correct:** SAKSHAM is a dedicated and unified platform for providing online training and medical education to all health professionals in the country. This

digital learning platform will ensure inclusive capacity building of health professionals from primary health centres located in rural and remote areas all the way up to tertiary care and corporate hospitals in metropolitan cities.

- **Currently SAKSHAM:** LMIS is hosting more than 200 public health and 100 clinical courses through online mode. Health professionals can register themselves for these courses on the portal.

Q 98. With reference to the “Mixed reality”, consider the following statements:

1. It incorporates elements of augmented reality (AR) and virtual reality (VR).
2. Unlike the Virtual reality, Mixed reality requires the usage of headset.

Which of the statements given above is/are correct?

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

Ans: (c)

Explanation:

- **Statement 1 is correct:** Mixed reality or MR specifically, involves the blending of real and virtual worlds. Put simply, the MR experience viewed in the head-mounted display combines aspects of both virtual reality (VR) and augmented reality (AR).
- **Statement 2 is correct:** Mixed reality requires the use of a headset like for VR, though often these headsets are also equipped with a camera so it can scan a user’s surroundings. The result is being able to see the physical world through your VR headset, but with superimposed visuals and effects.

Q 99. With reference to the “QR-Code based Coin Vending Machine (QCVM)”, Consider the following statements:

1. It was introduced by the National Payments Corporation of India.
2. It is a cashless coin dispenser machine that accepts United Payments Interface (UPI) transactions.

Which of the statements given above is/are correct?

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

Ans: (b)

Explanation:

- **Statement 1 is incorrect:** QR-code based coin vending machines (QCVM) is launched by the Reserve Bank of India. These vending machines are intended to be installed at public places such as railway stations, shopping malls, and marketplaces to enhance ease and accessibility.
- **Statement 2 is correct:** The QCVM is a cashless coin dispensing machine that uses the United Payments Interface (UPI) to debit the customer's account for the amount issued. It will eliminate the need to physically tender and authenticate banknotes. Customers will also be able to withdraw coins in the required number and denominations from QCVMs.

Q 100. 'Kirit Parikh Committee', recently seen in news is related to:

- (a) Reforms in criminal laws
- (b) Pricing regime for domestic natural gas
- (c) Development of mutual funds
- (d) Strengthen capital goods sectors

Ans: (b)

Explanation:

- Kirit Parikh was established in 2022 with the purpose of examining the current natural gas pricing structure in India for gas generated domestically.
- Its recommendations were accepted by the Cabinet Committee on Economic Affairs (CCEA).
- The main recommendations of the Group are as under: -
 - Prices of Petrol and Diesel should be market determined, both at the refinery gate and at the retail level.
 - PDS Kerosene allocation across states should be rationalized, which will bring down all-India allocation by at least 20%.



KHAN SIR

