

VAJIRAM & RAVI

Institute for IAS Examination

UPSC Preliminary Examination, 2024

Answer Key & Detailed Answer Explanation

SET - A



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					UP	SC Prelim	s 2024 - G	S Paper I	– Answe	r Key					
SET - A			SET - B				SET - C				SET - D				
1. (d)	26. (a)	51. (d)	76. (d)	1. (d)	26. (b)	51. (a)	76. (d)	1. (a)	26. (d)	51. (d)	76. (a)	1. (d)	26. (d)	51. (d)	76. (b)
2. (a)	27. (d)	52. (c)	77. (d)	2. (d)	27. (d)	52. (d)	77. (a)	2. (d)	27. (d)	52. (d)	77. (d)	2. (a)	27. (b)	52. (a)	77. (d)
3. (d)	28. (a)	53. (d)	78. (c)	3. (d)	28. (b)	53. (a)	78. (c)	3. (a)	28. (c)	53. (d)	78. (a)	3. (b)	28. (a)	53. (d)	78. (b)
4. (a)	29. (c)	54. (b)	79. (a)	4. (d)	29. (c)	54. (b)	79. (d)	4. (b)	29. (a)	54. (d)	79. (c)	4. (d)	29. (c)	54. (a)	79. (c)
5. (c)	30. (a)	55. (b)	80. (c)	5. (b)	30. (c)	55. (c)	80. (d)	5. (c)	30. (c)	55. (b)	80. (a)	5. (c)	30. (d)	55. (c)	80. (c)
6. (b)	31. (b)	56. (a)	81. (c)	6. (c)	31. (d)	56. (c)	81. (d)	6. (c)	31. (d)	56. (c)	81. (a)	6. (d)	31. (d)	56. (b)	81. (d)
7. (a)	32. (d)	57. (b)	82. (d)	7. (b)	32. (a)	57. (d)	82. (c)	7. (d)	32. (a)	57. (b)	82. (a)	7. (d)	32. (c)	57. (a)	82. (d)
8. (b)	33. (a)	58. (b)	83. (c)	8. (c)	33. (d)	58. (d)	83. (d)	8. (d)	33. (c)	58. (c)	83. (d)	8. (c)	33. (d)	58. (b)	83. (d)
9. (a)	34. (b)	59. (a)	84. (b)	9. (b)	34. (a)	59. (b)	84. (b)	9. (b)	34. (c)	59. (b)	84. (c)	9. (a)	34. (b)	59. (a)	84. (d)
10. (b)	35. (d)	60. (c)	85. (b)	10. (a)	35. (c)	60. (b)	85. (b)	10. (b)	35. (b)	60. (a)	85. (d)	10. (c)	35. (b)	60. (b)	85. (b)
11. (a)	36. (d)	61. (d)	86. (d)	11. (b)	36. (b)	61. (c)	86. (a)	11. (c)	36. (d)	61. (b)	86. (b)	11. (d)	36. (a)	61. (c)	86. (c)
12. (a)	37. (d)	62. (a)	87. (b)	12. (d)	37. (a)	62. (d)	87. (b)	12. (d)	37. (a)	62. (d)	87. (d)	12. (a)	37. (b)	62. (a)	87. (b)
13. (d)	38. (c)	63. (c)	88. (a)	13. (a)	38. (b)	63. (c)	88. (b)	13. (c)	38. (c)	63. (a)	88. (b)	13. (c)	38. (b)	63. (d)	88. (c)
14. (c)	39. (d)	64. (c)	89. (c)	14. (b)	39. (a)	64. (b)	89. (a)	14. (b)	39. (d)	64. (b)	89. (c)	14. (c)	39. (a)	64. (a)	89. (b)
15. (d)	40. (c)	65. (b)	90. (d)	15. (d)	40. (b)	65. (b)	90. (c)	15. (b)	40. (d)	65. (d)	90. (c)	15. (b)	40. (c)	65. (a)	90. (a)
16. (b)	41. (d)	66. (d)	91. (a)	16. (d)	41. (c)	66. (d)	91. (d)	16. (d)	41. (d)	66. (d)	91. (d)	16. (d)	41. (a)	66. (a)	91. (b)
17. (d)	42. (d)	67. (a)	92. (d)	17. (d)	42. (a)	67. (b)	92. (a)	17. (b)	42. (c)	67. (d)	92. (a)	17. (a)	42. (d)	67. (d)	92. (d)
18. (b)	43. (d)	68. (c)	93. (a)	18. (c)	43. (d)	68. (a)	93. (b)	18. (a)	43. (d)	68. (c)	93. (d)	18. (c)	43. (a)	68. (a)	93. (a)
19. (c)	44. (d)	69. (d)	94. (b)	19. (d)	44. (a)	69. (c)	94. (d)	19. (c)	44. (b)	69. (d)	94. (a)	19. (d)	44. (b)	69. (c)	94. (b)
20. (c)	45. (b)	70. (d)	95. (c)	20. (c)	45. (a)	70. (d)	95. (c)	20. (d)	45. (b)	70. (c)	95. (c)	20. (d)	45. (c)	70. (a)	95. (d)
21. (c)	46. (c)	71. (d)	96. (c)	21. (a)	46. (a)	71. (d)	96. (d)	21. (d)	46. (a)	71. (c)	96. (b)	21. (c)	46. (c)	71. (a)	96. (d)
22. (a)	47. (b)	72. (a)	97. (d)	22. (a)	47. (d)	72. (a)	97. (d)	22. (a)	47. (b)	72. (a)	97. (a)	22. (d)	47. (d)	72. (a)	97. (d)
23. (d)	48. (c)	73. (b)	98. (d)	23. (d)	48. (a)	73. (c)	98. (c)	23. (b)	48. (b)	73. (d)	98. (b)	23. (c)	48. (d)	73. (d)	98. (c)
24. (a)	49. (b)	74. (d)	99. (b)	24. (c)	49. (c)	74. (c)	99. (a)	24. (d)	49. (a)	74. (a)	99. (a)	24. (b)	49. (b)	74. (c)	99. (d)
25. (a)	50. (a)	75. (c)	100. (b)	25. (d)	50. (a)	75. (b)	100. (c)	25. (c)	50. (c)	75. (a)	100. (b)	25. (b)	50. (b)	75. (d)	100. (c)

QI.

Answer: d Explanation:

Terrestrial Radiation:

- The major part of the insolation is in short wavelengths' range and gases of the atmosphere are not good in absorbing the short wavelengths, thus there is not much heating of the atmosphere by the direct sunlight.
- The insolation received by the earth is in short wave forms and heats up its surface. The earth after being heated itself becomes a radiating body and it radiates energy to the atmosphere in long wave form. This energy heats up the atmosphere from below. This process is known as terrestrial radiation.
- The long wave radiation is absorbed by the atmospheric gases, particularly by carbon dioxide and other greenhouse gases. Thus, the atmosphere is indirectly heated by the Earth's radiation.
- The atmosphere in turn radiates and transmits heat to space. Finally, the amount of heat received from the sun is returned to space, thereby maintaining a constant temperature at the earth's surface and in the atmosphere.

So, statement-I is incorrect, but Statement-II is correct. Therefore, option (d) is the correct answer.

Q2.

Answer: a **Explanation**:

- The lower latitudes have stronger convectional currents because of intense heating. Warmer the air, higher it rises. As warm air rises, it cools adiabatically. As a result, decline of temperature is seen up to greater elevations (16 18 Kms) over the equator. As we go to the higher latitudes, convection gets weaker and warm air rises to the lower elevations. The decrease of temperature is seen up to lower elevations (over poles upto 8 -1 0 Kms).
- The troposphere is the lowermost layer of the atmosphere. Its average height is 13 km and extends roughly to a height of 8 km near the poles and about 18 km at the equator. The thickness of the troposphere is greatest at the equator because heat is transported to great heights by strong convectional currents. This layer contains dust particles and water vapour. All changes in climate and weather take place in this layer. The temperature in this layer decreases at the rate of 1° C for every 165m of height. This is the most important layer for all biological activity.

So, both Statements-I and Statements-II are correct and Statements-II explains Statement-I. Therefore, option (a) is the correct answer.

Q3.

Answer: d Explanation:

• The material in the upper mantle portion is called magma. Once it starts moving towards the crust or it reaches the surface, it is referred to as lava. The material that reaches the ground includes lava flows, pyroclastic debris, volcanic bombs, ash and dust and gases such as nitrogen compounds, sulphur compounds and minor amounts of chlorene, hydrogen and argon.

So, all four of the above are products of volcanic eruptions. Therefore, option (d) is the correct answer.

Q4.

Answer: a Explanation:

• The first statement is the result of differential heating of the land and the water because of the difference in their specific heats. As the isotherms leave the land, they usually bend rather sharply toward the pole in the hemisphere experiencing winter and towards the equator in the summer hemisphere.

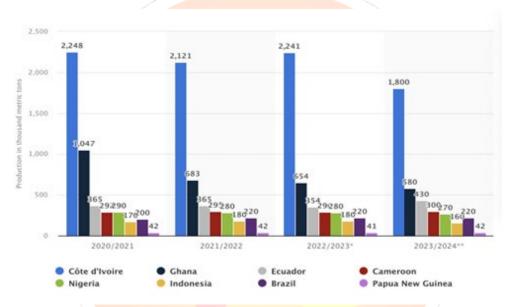
• In January the isotherms deviate to the north over the ocean and to the south over the continent. This can be seen in the North Atlantic Ocean. The presence of warm ocean currents, Gulf Stream and North Atlantic drift, make the Northern Atlantic Ocean warmer and the isotherms bend towards the north. Over the land, the temperature decreases sharply and the isotherms bend towards the south in Europe.

Therefore, option (a) is the correct answer.

Q5. Answer: c Explanation:

• Cocoa beans are grown on cacao trees and have been consumed for thousands of years. Today, dried and fermented seeds can be used to create chocolate, while the fat of the beans – or cocoa butter – can also be extracted and used for a variety of purposes, from moisturizing the skin and hair to cooking. Cocoa was first harvested in what is today Central America.

Global cocoa bean production from 2020/21 to 2023/24, by country is given below:



Therefore, option (c) is the correct answer.

Q6. Answer: b Explanation:

Ganga basin is the largest river basin in India in terms of catchment area, constituting 26% of the

country's land mass (8,61,404 Sq. km) and supporting about 43% of its population (448.3 million as

per 2001 census). River Ganga, emanating from Gangotri Glacier at Gaumukh, transverses a distance

of 2525 kms before flowing into Bay of Bengal. A large number of tributaries like Alaknanda,

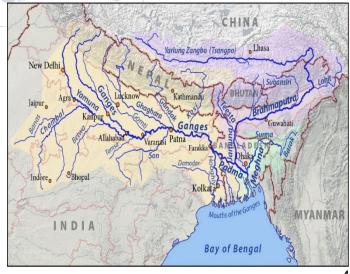
Ramganga, Kali, Yamuna, Gomti, Ghagra, Gandak, Kosi and Sone, draining 11 states of the country join

River Ganga at different confluence points during its journey. Major left-bank tributaries include the Gomti River,

Ghaghara River, Gandaki River, and Kosi River join the

Ganga downstream in Prayagraj from west to east.

Therefore, option (b) is the correct answer.



Q7.

Answer: a Explanation:

- Rainfall and temperature can affect the rate at which rocks weather.
- High temperatures and greater rainfall increase the rate of chemical weathering
- Rocks in tropical regions are exposed to abundant rainfall and hot temperatures much faster than similar rocks residing in cold, dry regions.
- Rainwater It is a form of natural water that can be categorized under the surface water as it is received as rainfall from the clouds.
- Gases that dissolve in rainwater before it reaches the ground:
 - Oxygen
 - Nitrogen
 - o Carbon dioxide
- Rain is due to condensation of water droplets in the atmosphere. It does not contain any dissolved salts like ordinary water. Therefore rain water can dissolve more amount of oxygen than ordinary water. Moreover, rainwater is in contact with atmospheric air. Hence, it contains more percentage of oxygen.

Therefore, option (a) is the correct answer.

Q8.

Answer: b
Explanation:
North Sea:

- It is a sea in northern Europe and is part of the Atlantic Ocean.
- Borders: It is bordered by the United Kingdom and Norway to the
 west, Denmark to the south, Germany, the Netherlands, Belgium,
 and France to the east, and the Faroe Islands and Norway's Svalbard
 archipelago to the north.

So, only two of the above countries have a border with the North Sea. Therefore, option (b) is the correct answer.



09.

Answer: a Explanation:

Malwa region:

- While Dhuandhar falls on the Narmada River in Jabalpur (Eastern MP). So, pair I is not correctly matched.
- The Hundru Falls in Ranchi is created on the course of the Subarnarekha River, where it falls from a height of 320 feet creating the highest waterfalls in the state. It is located in the Chotanagpur region. So, pair 2 is correctly matched.

• Gersoppa Falls, also known as Jog Falls, lies on the Sharavati River in the Western Ghats. So, pair 3 is







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Therefore, option (a) is the correct answer.

Q10.

Answer: b Explanation:

- There are three types of mountains- Fold Mountains, Block Mountains and the Volcanic Mountains.
- The **Himalayan Mountains, Alps and Andes are young fold mountains** with rugged relief and high conical peaks. The Aravali range in India is one of the oldest fold mountain systems in the world. The range has considerably worn down due to the processes of erosion.
 - Andes Mountains are a mountain system of South America and one of the great natural features on Earth.
- The **Appalachians in North America and the Ural mountains** in Russia have rounded features and low elevation. They are very old **fold mountains**.
- **Block Mountains** are created when large areas are broken and displaced vertically. The uplifted blocks are termed as horsts and the lowered blocks are called graben. The Rhine Valley and the **Vosges mountain** in **Europe** are examples of such mountain systems.

Therefore, option (b) is the correct answer.

QII.

Answer: a Explanation:

Donyi Polo Airport, Itanagar:

- It is the **first greenfield airport** in **Arunachal Pradesh** and has been developed in an area of over 690 acres, at a cost of more than Rs. 640 crores. With a 2300 m runway, the airport is suitable for all weather day operations. The airport terminal is a modern building, which promotes energy efficiency, renewable energy and the recycling of resources. **So, point I is correct.**
- The government of India has accorded 'In-Principle' approval for setting up of 21 new Greenfield Airports namely, Mopa in Goa, Navi Mumbai, Shirdi and Sindhudurg in Maharashtra, Kalaburagi, Vijayapura, Hassan and Shivamogga in Karnataka, Dabra (Gwalior) in Madhya Pradesh, **Kushinagar** and Noida (Jewar) in Uttar Pradesh, Dholera and Hirasar in Gujarat, Karaikal in Puducherry, Dagadarthi, Bhogapuram and Orvakal (Kurnool) in Andhra Pradesh, Durgapur in West Bengal, Pakyong in Sikkim, Kannur in Kerala and Hollongi (Itanagar) in Arunachal Pradesh across the country. Out of these, I.I. Greenfield airports viz. Durgapur, Shirdi, Kannur, Pakyong, Kalaburagi, Orvakal (Kurnool), Sindhudurg, Kushinagar, Itanagar, Mopa and Shivamogga have been operationalised. **So, point 2 is correct and point 3 is not correct.**

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Therefore, option (a) is the correct answer.

Q12.

Answer: a Explanation:

Water Vapour:

- It is also a variable gas in the atmosphere, which decreases with altitude. In the warm and wet tropics, it may account for four per cent of the air by volume, while in the dry and cold areas of desert and polar regions, it may be less than one per cent of the air. Water vapour also decreases from the equator towards the poles.
- It also absorbs parts of the insolation from the sun and preserves the earth's radiated heat. It thus, acts like a blanket allowing the earth neither to become too cold nor too hot. Water vapour also contributes to the stability and instability of the air.

Therefore, option (a) is the correct answer.

Q13.

Answer: d Explanation:

Marine West Coast Climate:

- It is located poleward from the Mediterranean climate on the west coast of the continents. The main areas are: Northwestern Europe, the west coast of North America, north of California, southern Chile, southeastern Australia and New Zealand.
- Due to marine influence, the temperature is moderate and in winter, it is warmer than for its latitude. The mean temperature in summer months ranges from 15°-20°C and in winter 4°- 10°C. The annual and daily ranges of temperature are small. Precipitation occurs throughout the year. Precipitation varies greatly from 50-250 cm.

Therefore, option (d) is the correct answer.

Q14.

Answer: c Explanation:

- The Coriolis force is in proportion to the rate of decrease of the earth's rotational speed from the equator to the poles. The earth's rotational speed decreases at an increasing rate from equator to the poles.
- In lower latitudes near equator, rotational speed increases at a lower rate and that results in weaker Coriolis force. In higher latitudes, the earth's rotational speed decreases at a faster rate, and that results in stronger Coriolis force.
- The Coriolis force is directly proportional to the velocity of the moving object (such as wind). The deflection is more when the wind velocity is high. So, statement I is correct.
- It is maximum at the poles and is absent at the equator. So, statement 2 is correct.

Therefore, option (c) is the correct answer.

Q15.

Answer: d Explanation:

- Seasonality gets manifested by changing length of the day. The length of a day depends upon the fact that how the circle of illumination cuts the earth into two halves: light half (day) and dark half (night).
- The seasonal variation in the length of a day increases as we go higher in latitudes. The higher the latitudes, the longer is the summer day.
- On 21st June, all areas from the Arctic circle to the North Pole have Sun above the horizon for the entire day.
- On 21st June, the earth is cut so by the circle of illumination, that at the tropic of cancer also, the length of the day will be more than 12 hours.

Therefore, option (d) is the correct answer.

Q16.

Answer: b Explanation:

- The Congo Basin is home to the world's largest tropical peatlands, along with Brazil and Indonesia. The peat swamp forest of the Congo Basin stores around 29 billion tons of carbon approximately equivalent to three years' worth of global greenhouse gas emissions while the Basin as a whole absorbs nearly 1.5 billion tons of carbon dioxide a year. The Basin stretches across six countries- Cameroon, Central African Republic, Democratic Republic of the Congo, Congo, Equatorial Guinea and Gabon.
- Peatlands cover only 3 per cent of the global land surface but store an estimated 600 billion tons of carbon twice
 as much as in all the world's forests. This makes them one of the most efficient carbon sink ecosystems and
 underlines the need to protect them.

Therefore, option (b) is the correct answer.

Q17. Answer: d Explanation:

- Per- and polyfluoroalkyl substances (PFAS) are a diverse group of thousands of chemicals used in hundreds of types of products. PFAS in the environment can enter the food supply through plants and animals grown, raised, or processed in contaminated areas. PFAS are used in cookware, food packaging, and food processing for their non-stick and grease, oil, and water-resistant properties. So, statement 1 is correct.
- PFAS molecules have a chain of linked carbon and fluorine atoms. Because the carbon-fluorine bond is one of the strongest, these chemicals do not degrade easily in the environment. So, statement 2 is correct.
- The widespread use of PFAS and their persistence in the environment means that PFAS from past and current uses have resulted in increasing levels of contamination of the air, water, and soil.
- Accumulation of certain PFAS has also been shown through blood tests to occur in humans and animals. While
 the science surrounding the potential health effects of bioaccumulation is developing, exposure to some types of
 PFAS has been associated with serious health effects. So, statement 3 is correct.

Therefore, option (d) is the correct answer

Q18.

Answer: b Explanation:

- Parasitoids are small insects whose immature stages develop either within or attached to the outside of other insects, referred to as hosts.
- Parasitoids eventually kill the host they feed on, as opposed to parasites like fleas and ticks, which typically feed upon hosts without killing them.
- There are two general categories of parasitoids: endoparasitoids, which hatch within the host from eggs or larvae laid there by an adult female, and then feed and develop inside the host; and ectoparasitoids, which are fastened to the outside of the host and feed through the host skin, sucking out body fluids.
- Most parasitoids are either wasps and bees (Hymenoptera) or flies (Diptera), although a few species
 of beetles, twisted-wing insects, moths, and other insects have been identified as parasitoids.

Therefore, option (b) is the correct answer.



Q19. Answer: c Explanation:

- The Fabaceae, or pea family, is a large group of flowering plants (angiosperms) within the order Fabales. It is the third-largest family among angiosperms, following Orchidaceae (orchid family) and Asteraceae (aster family). Fabaceae includes over 700 genera and approximately 20,000 species of trees, shrubs, vines, and herbs, distributed worldwide. Key commercial species within this family include soybeans (Glycine max), garden peas (Pisum sativum), peanuts (Arachis hypogaea), and alfalfa (Medicago sativa). While most woody species are found in tropical regions, herbaceous (nonwoody) species are primarily located in temperate areas.
- Groundnut (Arachis hypogaea) and Horse-gram (Macrotyloma unifl orum) belongs to the Fabaceae family.

So, all three of the above belong to the Pea family. Therefore, option (c) is the correct answer.

Q20.

Answer: c
Explanation:

Indian Flying Fox:

- Bats are the only flying mammals in the world, and the Indian Flying Fox is one of the largest. The name of the species, also called the Great Indian Fruit Bat, eats fruits, feeds on the juice, and helps in seed dispersion and pollination, making them an integral part of the ecosystem. It is native to the Indian subcontinent. So, statement 2 is not correct.
- The nectar and fruit-eating flying fox (Pteropus giganteus) is generally considered a vermin as they raid orchards. The Flying Foxes in the Indian Wildlife Protection Act 1972 is classified as a vermin. It had a similar official status under Schedule V of the Wildlife (Protection) Act of 1972 until it was put on the Schedule II list entailing a higher degree of protection. So, statement I is correct.

Therefore, option (c) is the correct answer.

Q21.

Answer: c Explanation:

- **Froghopper** is any of numerous species of small hopping **insects** worldwide in distribution, that produce a frothy substance known as spittle.
- Cicadas are members of the superfamily Cicadoidea and are physically distinguished by their stout bodies, broad heads, clear-membraned wings, and large compound eyes. Cicadas are famous for their penchant for disappearing entirely for many years, only to reappear in force at regular intervals. The cicadas' amazing lifestyle has been a source of fascination since ancient times. Several cultures regarded these insects as powerful symbols of rebirth due to their unusual life cycles.
- The pond skater is a small, thin black-brown insect. They have small heads and relatively large eyes. Pond skaters use their long thin legs to propel their bodies across the water. The middle legs are used to propel the insect's body forward and the back legs are used for steering. The pond skaters' sharp mouth parts and their smallest set of limbs are used to prey on small insects found on the surface of the water.

Therefore, option (c) is the correct answer.

Q22.

Answer: a **Explanation**:

- Chewing gum is essentially plastic infused with flavours and colourings. It is non-digestible and water-insoluble, allowing you to chew it continuously without it breaking down. This indestructible quality comes from the gum base, the specific ingredients of which are often kept secret. Generally, the gum base includes:
- **Fillers:** Substances like calcium carbonate or magnesium silicate (talc) add texture and bulk. Talc is used in gums with acidic flavours to prevent reactions that would produce carbon dioxide gas, which would occur if calcium carbonate were used.
- Commercially, **chewing gum** is produced based on a synthetic gum base, which is non-biodegradable and remains in the environment for a long time. Accordingly, **chewing gum residue can be considered as a dangerous environmental pollutant.**
- Chewing gums often use plastic in their base, which doesn't break down easily. When people throw gum on the ground, it becomes litter which harms the environment because the plastic in it doesn't decompose.

So, both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.

Therefore, option (a) is the correct answer.

Q23.

Answer: d Explanation:

- Indri is considered to be the largest of the surviving lemur species. They are diurnal and arboreal. The amount of time of activity varies from season to season, depending on the amount of daylight available. Indri is an endangered species. It is endemic to Madagascar, and it is losing its rainforest habitat for fuel, timber, and slash-and-burn agriculture. So, pair I is not correctly matched.
- Elk inhabit a wide range of habitats, from open areas such as marshy meadows, grasslands, river flats, and aspen parkland, to coniferous forests. Elk are primarily found in western North America, especially in mountainous landscapes such as Wyoming's National Elk Refuge and Yellowstone National Park. So, pair 2 is not correctly matched.
- Bonobo is a species of ape found only in lowland rainforests along the south bank of the Congo River in the Democratic Republic of the Congo. Closely resembling the chimpanzee in both physical appearance and mode of life, the bonobo is more slender, with longer limbs, a narrower chest, and a rounder head with a less-protruding face. So, pair 3 is not correctly matched.

So, none of the pairs given above are correctly matched. Therefore, option (d) is the correct answer.

Q24.

Answer: a Explanation:

World Toilet Organization (WTO):

- It is a **global non-profit** dedicated to enhancing toilet and sanitation conditions worldwide founded on November 19, 2001. The WTO empowers individuals by providing education, training, and developing local market opportunities, enabling them to advocate for clean and safe sanitation facilities within their communities.
- WTO established World Toilet Day and the World Toilet Summit in 2001; this was followed by the World Toilet College in 2005. Through its various initiatives, WTO continues to provide an international platform for toilet associations, governments, academic institutions, foundations, UN agencies and corporate stakeholders to exchange knowledge and leverage media and corporate support to promote clean sanitation and public health policies. So, statement 2 is correct.

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- It was granted consultative status with the United Nations Economic and Social Council in 2013. The silence surrounding the sanitation crisis is beginning to break as evidenced by the Sustainable Development Goal's inclusion of sanitation on its global development agenda. Sustainable Development Goal #6 calls for universal access to adequate and equitable sanitation and the end of open defecation by 2030. So, statement I is not correct.
- Granting funds to the least developed countries and developing countries to achieve the end of open defecation is not the main focus of WTO. **So, statement 3 is not correct.**

Therefore, option (a) is the correct answer.

Q25. Answer: a Explanation:

- Lions have no particular breeding season, and often synchronize breeding, especially after a pride takeover, raising the cubs communally. Male lions become sexually mature at around 26 months old, but are unlikely to breed before the age of four or five, primarily due to a lack of opportunity until they are large enough at around this age to take over a pride and therefore its breeding rights. So, statement I is correct.
- The bones of the cheetah's voice box form a fixed structure, with divided vocal cords that vibrate with both in and out breaths. This structure is the same for all the 'small' cats. While this design enables these cats to purr continuously, it limits the range of other sounds and prevents them from being able to roar. So, statement 2 is correct.
- Lions proclaim their territory by roaring and by scent marking. Their distinctive roar is generally delivered in the evening before a night's hunting and again before getting up at dawn. Males also proclaim their presence by urinating on bushes, trees, or simply on the ground, leaving a pungent scent behind. Defecation and rubbing against bushes leave different scent markings.
- Both sexes of Leopards use urine to mark their territories, and often after urinating a male will then scrape the ground to transfer the scent of his urine onto his feet to be carried during territorial boundary patrols. Leopards are also often seen rubbing their faces and necks on vegetation as they are walking along their territory.

 So, statement 3 is not correct.

Therefore, option (a) is the correct answer.

Q26.

Answer: a Explanation:

• 100 Million Farmers is a platform supporting private and public leaders to position food and farmers as central pillars of the global climate and nature agenda and accelerate collective action to scale climate- and nature-friendly agricultural practices. 100 Million Farmers has bold objectives for accelerating the transition towards food and water systems that are net-zero, nature-positive and that increase farmer resilience.

Therefore, option (a) is the correct answer.

Q27.

Answer: d
Explanation:

Distributed Energy Resources:

- It often refers to smaller generation units located on the consumer's side of the meter. Examples of distributed energy resources that can be installed include:
 - o rooftop solar photovoltaic units
 - wind generating units
 - battery storage

- batteries in electric vehicles used to export power back to the grid
- o combined heat and power units, or tri-generation units that also utilise waste heat to provide cooling
- o biomass generators, which are fuelled with waste gas or industrial and agricultural by-products
- o open and closed cycle gas turbines
- o reciprocating engines (diesel, oil)
- hydro and mini-hydro schemes
- o fuel cells
- Many of these technologies are not exclusively found "behind the meter".
- Distributed generation (also known as embedded or local generation) is the term used when electricity is generated from sources, often renewable energy sources, near the point of use instead of centralised generation sources from power plants.

So, all four of the above are considered "Distributed Energy Resources". Therefore, option (d) is the correct answer.

Q28.

Answer: a **Explanation**:

• The banyan fig tree is famous for its aerial roots, sprout from branches and eventually reach the soil. The tree also has a unique relationship with a wasp that has coevolved with it and is the only insect that can pollinate it. The relationship between figs and wasps also presents an intriguing scientific challenge. The body shapes and sizes of the wasps correspond exactly to those of the fig fruits, and each species of fig produces a unique perfume to attract its specific wasp pollinator.

Therefore, option (a) is the correct answer.



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Q29. Answer: c Explanation:

- Butterflies often eat and store toxic chemicals while feeding on their host plant as caterpillars. Many butterflies use poisons to survive and advertise their noxiousness with specific "leave me alone" colours. Heliconian butterflies of the Americas, also called longwings, deploy cyanide to protect their eggs from predators however, these insects have evolved to tolerate the plant's defensive chemicals and many have become often dependent on them. So, point I is correct.
- **Pufferfish is the most poisonous fish.** Tetraodontidae is a family of primarily marine and estuarine fish of the order Tetraodontiformes.
- **Stonefish have venomous spines** along their dorsal fins. The venom can cause severe pain, swelling, tissue damage, and in some cases, death if not treated promptly. **So, point 2 is correct.**
- Many species of frog are known to be poisonous, such as the often colourful poison dart frogs. But although incredibly rare, there are species that are venomous too. There are currently only two species of frog known to be venomous: Bruno's casque-headed frog (Aparasphenodon brunoi) and Greening's frog (Corythomantis greeningi). Both are found in Brazil and produce skin secretions like other poisonous frogs but these species have spiny bone protrusions that make their poison venom. So, point 3 is correct.

So, all three of the above have poisonous species among them. Therefore, option (c) is the correct answer.

Q30. Answer: a Explanation:

- The cashew is native to northeastern Brazil. Portuguese missionaries took it to East Africa and India during the late I6th century, where it became abundant at low altitudes near the seacoast. The tree produces wood that is useful in local economies for such practical items as shipping crates, boats, and charcoal as well as for a gum that is similar to gum Arabic. So, point I is not correct.
- Papaya originated from southern Mexico, Central America, and northern South America. It is now cultivated in most tropical countries. It is highly sensitive to frost and waterlogging. In India, papaya is cultivated in states like Orissa, West Bengal, Kerala, Karnataka, Madhya Pradesh, Tamil Nadu and Gujarat. It is a potential fruit crop for commercial cultivation in Goa. So, point 2 is not correct.
- Red Sanders is an Indian endemic tree species, with a restricted geographical range in the Eastern Ghats. As a native species to Andhra Pradesh, Red Sanders's use and trade are regulated by the State. Following the amendment to the Wildlife (Protection) Act 1972 in December 2022, Red Sanders is now listed in Schedule IV. Under the foreign trade policy of India, the import of Red Sanders is prohibited, while export is restricted. Despite the regulation and legal protection, illegal logging and timber extraction remain major conservation concerns for the species. So, point 3 is correct.

Therefore, option (a) is the correct answer.

Q31. Answer: b Explanation:

- Radioisotope thermoelectric generators (RTGs) convert heat from radioactive decay into electricity using
 thermocouples. They power spacecraft and remote installations, providing reliable energy for decades. RTGs are
 crucial for missions where solar power is impractical, such as deep space exploration, due to their longevity and
 durability in harsh environments.
- RTGs are not miniature fission reactors. Instead, they rely on the natural radioactive decay of plutonium-238 to
 generate heat, which is then converted into electricity using thermocouples. No nuclear fission occurs in RTGs.
 So, Statement 1 is incorrect.

- RTGs provide electrical power for spacecraft, especially in situations where solar power is impractical or insufficient. They have been used in more than two dozen U.S. space missions since 1961. **So, Statement 2 is correct.**
- As per the given combination of options RTGs can use Plutonium-238, which is a byproduct of weapons development. **So, Statement 3 is correct.**
- However, many standard sources including NASA clearly mention that Plutonium-238 is not a weapon grade material.

Therefore, option (b) is the correct answer.

Q32.

Answer: d Explanation:

- Giant stars actually have shorter lifetimes compared to dwarf stars. Their massive cores burn through nuclear fuel more rapidly, leading to a shorter overall lifespan. Giant stars have a greater rate of the nuclear reactions that light up stars. Giant stars also use up the hydrogen fuel in their core faster, despite starting out with much more of it. Thus, they live much shorter lives than dwarf stars. So, Statement- I is incorrect.
- Giant stars, due to their higher mass, have hotter and denser cores. As a result, they experience more intense nuclear reactions, which contribute to their brightness and energy output. Giant stars thus have a greater rate of the nuclear reactions that light up stars. So, Statement-II is correct.

Therefore, option (d) is the correct answer.

Q33.

Answer: a **Explanation**:

- Nitric oxide (NO) is synthesized in the human body and plays a crucial role in vasodilation, which increases blood flow. The body produces nitric oxide from the amino acid L-arginine using the enzyme nitric oxide synthase (NOS). The primary site of NO synthesis is the inner layer of blood vessels (the endothelium), although other cell types also contribute to its production.
- NO acts as a powerful vasodilator, relaxing vascular smooth muscles in arteries. This dilation increases blood flow, benefiting overall cardiovascular health. It also serves as a neurotransmitter and is involved in various functions, including neuronal activity and learning.

Therefore, option (a) is the correct answer.

Q34.

Answer: b Explanation:

- Radars use radio waves to detect and locate objects by transmitting pulses and analyzing the reflected signals. They measure distance, speed, and direction, playing a vital role in aviation, maritime navigation, weather forecasting, and military applications. Radars enable precise tracking and surveillance over long distances and in various conditions. Although radars are usually used for counter-narcotics and counter-smuggling operations to track airplanes or ships involved in such activities, radars cannot identify narcotics on passengers at airports or in aircraft. **So, point I is not correct.**
- Radars are extensively used for monitoring of precipitation. Weather radars (specifically Doppler radars) are
 instrumental in monitoring and tracking precipitation, measuring the intensity of rainfall, and predicting weather
 patterns. So, point 2 is correct.
- Radars can be used to track the migration of animals, particularly birds and bats. Radar technology helps in monitoring flight patterns and migration routes of these animals over large distances. **So, point 3 is correct.**

Therefore, option (b) is the correct answer.

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Q35.

Answer: d **Explanation:**

- Fifth-generation fighters include major technologies developed during the first part of the 21st century. They typically have characteristics like stealth, super cruise (prolonged supersonic cruise without reheat), advanced avionics, and networked data fusion for situational awareness. Examples of combat-ready fifth-generation fighters include the Lockheed Martin F-22 Raptor, Lockheed Martin F-35 Lightning II, Chengdu J-20, and Sukhoi Su-57.
- The Rafale is a fourth-generation (4.5th) fighter jet developed by France. So, Option 1 is incorrect.
- The MiG-29 is also a fourth-generation fighter jet developed by Russia. So, Option 2 is incorrect.
- The Tejas MK-I is an indigenous Indian fighter, but it falls under the fourth generation (4.5th generation) as well. So, Option 3 is incorrect.

Therefore, option (d) is the correct answer.

O36.

Answer: d **Explanation:**

- Hydrogels are water-absorbent, crosslinked polymer networks that can hold large amounts of water. They are used in medical applications, such as wound dressings, drug delivery systems, and tissue engineering. Hydrogels' biocompatibility, flexibility, and responsiveness to environmental changes make them valuable in biotechnology and soft robotics.
- Hydrogels are widely used in controlled drug delivery systems because they can encapsulate drugs and release them in a controlled manner over time. This application leverages the hydrophilic nature and biocompatibility of hydrogels. So, Statement I is correct.
- Hydrogels can be used in mobile air-conditioning systems. They can absorb and release moisture, which can be useful in humidity control, a crucial aspect of air-conditioning. So, Statement 2 is correct.
- Hydrogels can be used in industrial lubricants to improve their properties, such as reducing friction and wear, controlling viscosity, and improving thermal stability. So, Statement 3 is correct.

Therefore, option (d) is the correct answer.

Q37.

Answer: d **Explanation:**

Fuel cell electric vehicles (FCEVs) are powered by hydrogen. They are more efficient than conventional internal combustion engine vehicles and produce no harmful tailpipe emissions. They only emit water vapour and warm air. FCEVs emit only water vapour, making them locally emission-free and contributing to cleaner air in cities.

4JIRAM & RAVI Therefore, option (d) is the correct answer.

O38.

Answer: c **Explanation:**

The term "pumped-storage hydropower" relates to long-duration energy storage. Pumped storage hydropower (PSH) is a type of hydroelectric energy storage. It is a configuration of two water reservoirs at different elevations that can generate power as water moves down from one to the other (discharge), passing through a turbine. The system also requires power as it pumps water back into the upper reservoir (recharge). PSH acts similarly to a giant battery, because it can store power and then release it when needed.

Therefore, option (c) is the correct answer.

Q39.

Answer: d **Explanation:**

The membrane bioreactor (MBR) has emerged as an efficient compact technology for municipal and industrial wastewater treatment. These systems combine biological treatment (using microorganisms) with membrane

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filtration to efficiently remove pollutants from wastewater. The membranes act as barriers, allowing clean water to pass through while retaining suspended solids and microorganisms. Membrane bioreactors are widely used in treating domestic and industrial wastewater.

Therefore, option (d) is the correct answer.

Q40. Answer: c

Explanation:

- The term "Collateralized Borrowing and Lending Obligation (CBLO)" is discussed in the context of money market instruments. A collateralized borrowing and lending obligation (CBLO) is a money market instrument that represents an obligation between a borrower and a lender concerning the terms and conditions of a loan.
- CBLOs represent an agreement between a borrower and a lender, where the borrower provides collateral (such as government securities) in exchange for cash from the lender. These short-term instruments facilitate borrowing and lending in a fully collateralized environment, primarily in India's financial markets.

Therefore, option (c) is the correct answer.

Q41.

Answer: d Explanation:

According to the World Health Organisation (WHO), the total fertility rate is defined as the average number
of children a hypothetical cohort of women would have at the end of their reproductive period if they
were subject during their whole lives to the fertility rates of a given period and if they were not subject to
mortality. It is expressed as children per woman.

Therefore, option (d) is the correct answer.

Q42.

Answer: d Explanation:

- The Liquidity Adjustment Facility (LAF) is a tool used by the Reserve Bank India (RBI) to manage liquidity and money supply in the economy.
- As of the latest regulations, all Scheduled Commercial Banks (excluding Regional Rural Banks) and Primary Dealers (PDs) having Current Accounts and SGL Accounts with Reserve Bank, Mumbai are allowed direct access to the LAF window. NBFCs, despite being important players in the financial sector, do not have direct access to this facility. So, statement 1 is not correct.

Note: RBI had allowed some NBFCs during Covid phase to avail liquidity under LAF facility. But, in generic sense, LAF is not applicable to all NBFCs.

- Foreign Institutional Investors (and Foreign Portfolio Investors) are allowed to invest in government securities (G-Secs) within certain limits set by the RBI and SEBI (Securities and Exchange Board of India). So, statement 2 is correct.
- Debt Markets are markets for fixed income securities issued by Central and State Governments, Municipal Corporations, Govt. bodies and commercial entities like Financial Institutions, Banks, Public Sector Units, Public Ltd. companies and also structured finance instruments.
- In India, stock exchanges like the National Stock Exchange and Bombay Stock Exchange offer separate trading platforms for debt instruments, including corporate bonds, government securities, and other fixed-income securities. These platforms provide a dedicated space for trading in debt instruments, which helps in better price discovery and liquidity. So, statement 3 is correct.

Therefore, option (d) is the correct answer.

Q43.

Answer: d Explanation:

- An active corporate bond market serves multiple functions. Apart from providing borrowers an alternative to bank finance, corporate bonds can lower the cost of long-term funding. Banks are typically constrained in lending long-term because their liabilities are relatively of a shorter tenor. An efficient corporate bond market with lower costs and quicker issuing time can offer an efficient and cost-effective source of longer-term funds for corporates. At the same time, it can also provide institutional investors such as insurance companies and provident and pension funds with long-term financial assets ("preferred habitat"), helping them match the durations of their assets and liabilities.
- In India, all three categories Insurance Companies, Pension Funds and Retail Investors can trade in Corporate Bonds and Government Securities.

Therefore, option (d) is the correct answer.

Q44.

Answer: d Explanation:

Financial instruments are contracts that represent a financial asset, liability, or ownership stake. They facilitate the flow of money between investors and borrowers and can be used for various purposes like investment, risk management, and speculation.

- Exchange-Traded Funds (ETFs): These are investment funds that track a basket of securities like stocks, bonds, or commodities. They trade on stock exchanges like individual shares, and investors can buy or sell units of the ETF. So, point I is correct.
- Motor Vehicles: Cars, trucks, and other motor vehicles are not financial instruments. They are considered physical assets and while you can buy and sell them, they don't represent a financial obligation or contract. So, point 2 is not correct.
- Currency Swap: This is a financial agreement between two parties to exchange cash flows denominated in different currencies. It allows for managing foreign exchange risk or speculating on currency movements. So, point 3 is correct.

Therefore, option (d) is the correct answer.



Q45.

Answer: b Explanation:

• Storage of agricultural produce - Tertiary Sector

• This sector deals with transforming raw materials into finished goods. While storage facilities play a crucial role in the agricultural supply chain, they primarily involve preserving existing products, not transforming them. **So, statement I is not correct.**

• Dairy Farm - Primary Sector

This sector directly extracts resources from nature. Dairy farming falls under this category as it involves raising animals for their milk and other products. **So, statement 2 is correct.**

Mineral exploration - Primary Sector

 This sector provides services to the other two sectors. Mineral exploration, while not directly producing goods, involves discovering natural resources under the ground. This aligns more closely with the primary sector. So, statement 3 not is correct.

Weaving cloth - Secondary Sector

• Weaving cloth is a prime example of transforming raw materials (yarn) into a finished good (cloth). This perfectly fits the definition of the secondary sector. **So, statement 4 is correct.**

Therefore, option (b) is the correct answer.

Q46.

Answer: c Explanation:

- Sustainable Aviation Fuel (SAF) aims to reduce the environmental impact of aviation by using renewable or waste-based resources.
- SAF is a biofuel used to power aircraft that has similar properties to conventional jet fuel but with a smaller carbon footprint. Depending on the feedstock and technologies used to produce it, SAF can reduce life cycle GHG emissions dramatically compared to conventional jet fuel. Some emerging SAF pathways even have a net-negative GHG footprint.
- An estimated I billion dry tons of biomass can be collected sustainably each year in the United States, enough to produce 50–60 billion gallons of low-carbon biofuels. These resources include:

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- Corn grain
- o Oil seeds
- Algae
- Other fats, oils, and greases
- Agricultural residues
- Forestry residues
- Wood mill waste
- Municipal solid waste streams
- Wet wastes (manures, wastewater treatment sludge)
- Dedicated energy crops.

Therefore, option (c) is the correct answer.

Q47.

Answer: b Explanation:

• **Fixed Capital**: Fixed capital refers to long-term tangible assets used in the production process. These assets are relatively permanent and are not intended to be sold or converted to cash within a short period (usually more than one year).

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• Working Capital: Working capital refers to short-term assets and liabilities that a company uses in its day-to-day operations. These assets are constantly changing as they are used and replaced within a year (operating cycle).

• Farmer's plough - Fixed capital

These are short-term assets used in the day-to-day operations of a business. They are typically consumed
or converted into cash within a year. A farmer's plough is a durable tool used repeatedly in the production
process. So, pair I is not correctly matched.

• Computer - Fixed capital

 These are tangible assets with a relatively long lifespan (more than one year) used in the production process. They depreciate (lose value) over time but are not consumed entirely during production. A computer fits this definition. So, pair 2 is correctly matched.

• Yarn used by the weaver - Working capital

• Yarn is a raw material directly used in weaving cloth. Raw materials are considered current assets within working capital. Once used in production, they are gone. **So, pair 3 is not correctly matched.**

• Petrol - Working capital

• Petrol is fuel consumed in the operation of machinery or vehicles. It's a short-term asset used in production and gets entirely consumed within a short period. **So, pair 4** is correctly matched.

Therefore, option (b) is the correct answer.

Q48.

Answer: c Explanation:

• The most appropriate word/phrase to describe the given concept is "metaverse". The term "metaverse" refers to an interconnected network of 3D virtual worlds that can be accessed by millions of users simultaneously. Users can create and own virtual items within the metaverse.

Therefore, option (c) is the correct answer.

Q49.

Answer: b Explanation:

- The RBI does have a minimum capital requirement for wholly owned banking subsidiaries set at ₹5 billion. This applies to both new foreign banks setting up a subsidiary in India and existing foreign banks with a branch presence that want to convert to a wholly owned subsidiary. So, Statement I is incorrect.
- As per the Scheme for setting up of wholly owned subsidiaries by foreign banks in India: not less than 50 per cent directors should be Indian nationals/NRIs/PIOs subject to the condition that one-third of the directors are Indian nationals resident in India. So, Statement 2 is correct.

Therefore, option (b) is the correct answer.

O50.

Answer: a Explanation:

- Corporate Social Responsibility (CSR) activities are meant to benefit society, not the company itself. Schedule VII of the Companies Act, 2013 indicates the activities that can be undertaken as CSR which broadly relates to Health, sanitation, education, environment, sports, heritage, art and culture, rural development, slum area development, Disaster management, including relief, rehabilitation, and reconstruction activities, setting up old age homes, day care centers, measures for reducing inequalities faced by socially and economically backward groups etc. So, Statement I is correct.
- Companies meeting the criteria set by the Companies Act, 2013 must spend a minimum of 2% of their average net profits over three years on CSR. **So, Statement 2 is incorrect.**

Therefore, option (a) is the correct answer.

Q51.

Answer: d **Explanation**:

- If the USA were to default on its debt holders of US treasury bonds will not be able to exercise their claims to receive payments. a default on one government bill, note or bond does not trigger a default across all of the government's debt, known as "cross default,". Still, any collateral affected by a default would need to be replaced.

 So, statement I is not correct.
- The USA Government debt is not backed by any hard assets, but only by the faith of the Government. So, statement 2 is correct.

Therefore, option (d) is the correct answer.

Q52.

Answer: c

Explanation: Syndicating allows lenders to spread risk and take part in financial opportunities that may be too large for their individual capital base. Lenders are referred to as a <u>syndicate</u>, which works together to provide funds for a single borrower. Syndicated lending spreads the <u>risk of borrower default across multiple</u> lenders. **So, statement I is correct.**

• The borrower can be a corporation, a large project, or a sovereign government. The loan can involve a fixed amount of funds, a <u>credit line</u>, or a combination of the two.

So, statement 2 is not correct.

Therefore, option (c) is the correct answer.





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Q53.

Answer: d Explanation:

The features of CBDC include:

- CBDC is sovereign currency issued by Central Banks in alignment with their monetary policy. So, statement I is correct.
- It appears as a liability on the central bank's balance sheet. So, statement 2 is correct.
- Must be accepted as a medium of payment, legal tender, and a safe store of value by all citizens, enterprises, and government agencies.
- Freely convertible against commercial bank money and cash. So, statement 4 is correct.
- Fungible legal tender for which holders need not have a bank account
- Expected to lower the cost of issuance of money and transactions.
- The digital rupee itself isn't inherently inflation-proof. Inflation can still erode its value. So, statement 3 is not correct.

Therefore, option (d) is the correct answer.

Q54.

Answer: b Explanation:

- In ancient texts, epithets such as **Arhats, Parivrajaka, Vira** etc were common uses for great monks belonging to Ajivikas, Buddhism & Jainism.
- Under Jain texts, the epithet Nataputta or Nayaputta was referred to Mahavira. So, point 1 is not correct.
- The epithets of Tathagata & Shakyamuni is associated with Buddha where he is called as:
 - Tathagata: "One who has thus gone" or liberated himself from endless cycle of Samara or Death & Birth. So, point 3 is correct.
 - Shakyamuni: Ashoka's Lumbini Pillar inscription mentions the birth of Shakyamuni or Buddha at Lumbini, as he belonged to Shakya Clan. So, point 2 is correct.

Therefore, option (b) is the correct answer.

Q55.

Answer: b

- Chandraketugarh: An ancient important trade center and port site Contempo of Gupta period in present day North 24 Parganas in West Bengal & not Odisha. So, pair 1 is not correctly matched.
- Inamgaon: It is a famous Chalcolithic site in the state of Maharashtra. So, pair 2 is correctly matched.
- Mangadu: The megalithic monuments at Mangadu consists of Urn burial sites, south of Ashtamudi Lake in Kerala.
 So, pair 3 is correctly matched.
- Salihundam: It is a Buddhist site where various important Buddhist Stupas are found, however a major rock cut shrine is not present in Salihundam, which is in Andhra Pradesh. So, pair 4 is not correctly matched.

So, only two of the above pairs are correctly matched.

Therefore, option (b) is the correct answer.

Q56.

Answer: a Explanation:

- Long before the modern era of resort politics, in what was the Golden Age of Karnataka, horse-trading, in its literal sense, used to be a noble profession.
- In the vast Vijayanagar Empire (1336-1565 AD) that stretched around Hampi from coast to coast there was no port more important than Bhatkal.

- Located by the Arabian Sea, merchants from across the world came here to sell their wares, especially horses from Arabia and weapons in exchange for sugar, pepper, spices and fine white rice.
- Many of Bhatkal's temples and Jain basadis were built during this period of prosperity.
- Emperor Krishnadevaraya allowed the Portuguese to build a fort here in 1510, but little of it survives today.

Therefore, option (a) is the correct answer.

Q57.

Answer: b Explanation:

• Permanent Settlement System:

- It was designed by John Shore & implemented by Lord Cornwallis in 1793
- The local Rajas, Taluqdars, Chaudharis etc were made Zamindars: In charge of collecting revenue from villages on behalf of the State
- Revenue was fixed at 45% of the produce of which 10/11th share was fixed for the Company & 1/11th share went to Zamindars
- This amount to be paid was fixed permanently
- The Right to collect revenue was Hereditary but transferable in case of Non- payment under Sunset clause
- Ounder the **Sunset Law 1793**, If a Zamindar failed to deposit the fixed amount of revenue in the British revenue exchequer on time, his Zamindari rights would be confiscated, and the revenue would be collected by auctioning his property. Therefore, several Zamindars lost their rights, privileges and properties, and some of them like Babu Kunwar Singh took part in the 1857 revolt.

• Ryotwari Settlement:

- Alexander Read, a company official, tried to collect revenue directly from the peasants in the regions captured from Mysore state under Treaty of Seringapatam 1792 This practice already existed under Risala system of Haider Ali & Tipu Sultan where they collected revenue directly from peasants through State officials
- It was further developed by Thomas Munro in 1820 when he became the Governor of Madras region
- The idea was that in Southern regions, there was no large Zamindars with large estates thus settlement made directly with peasants or ryots
- Thus, fields of Peasants were surveyed & revenue was fixed accordingly (for a period of 20 or 30 years).
- O Under the Ryotwari Settlement of revenue collection, the peasants were not exempted from revenue payment in case of bad harvest or natural calamities rather their rents were lowered. The Madras Torture commission report 1855 CE records incidences of torture on peasants for non-payment of revenue. In fact, in none of the revenue assessments introduced by the British such relief was provided to the peasants.

So, statement I is not correct.

Therefore, option (b) is the correct answer.

O58.

Answer: b Explanation:

A parable is a short allegorical story designed to illustrate or teach some truth, religious principle, or moral lesson. Upanishads also called as Vedanta tried to explain the higher meaning of rituals, and answered metaphysical questions like Atma, Brahma and Prakriti. These lessons are presented in the form of questions and answers between Guru and Shishya. For example - The Chandogya Upanishad is one of the most famous and often-read Upanishads. It tells the story of a father teaching his son the ultimate truth of Hinduism. In the beginning of the Upanishad, the father sends the boy away to study the Vedas with a religious instructor. The Katha Upanishad, for

instance, uses the parable of the chariot to explain the nature of the self and the chariot rider. So, statement I is not correct.

On the other hand, Puranas are generally considered to be later compositions compared to the Upanishads. The Upanishads are believed to be composed between 800 BCE and 500 BCE, while the Puranas are estimated to have been compiled between 500 BCE and 1000 CE. So, statement 2 is correct.

Therefore, option (b) is the correct answer.

Q59.

Answer: a **Explanation:**

- The International Grains Council (IGC) is an intergovernmental organisation that seeks to:
 - Further international cooperation in grains trade;
 - o Promote expansion, openness and fairness in the grains sector;
 - Contribute to grain market stability and to enhance world food security.
- These objectives are sought by improving market transparency through information-sharing, analysis and consultation on market and policy developments. Grains, rice and oilseeds market conditions are monitored on a daily basis, through circulation of daily reports and maintaining web-based information services, and the Council formally exchanges information at Market Conditions Committee meetings and Council sessions. India is a member of the IGC. So, statement 1 is correct.
- Each member is designated as an importer or exporter on the basis of its average trade in grains, rice and oilseeds. The operations of the Council are financed by annual contributions from its members, which are proportionate to their share of world trade in grains, rice and oilseeds. A country need not be a member of the IGC for exporting or importing of Rice and Wheat. So, statement 2 is not correct.

Therefore, option (a) is the correct answer.

Q60.

Answer: c **Explanation:**

- The latest cultural heritage included in the list is Garba, a tradition dance form from Gujarat in December, 2023.
- Garba is a vibrant folk dance originating from the state of Gujarat in India. It's traditionally performed during Navratri, a nine-day festival celebrating the divine feminine.

Therefore, option (c) is the correct answer. **4JIRAM & RAVI**

Q61.

Answer: d **Explanation:**

Dr. Sachchidananda Sinha was elected to the Constituent Assembly from Bihar on a Congress Party ticket. He served as interim President of the Assembly before Rajendra Prasad was formally appointed as President.

Therefore, option (d) is the correct answer.

Q62.

Answer: a **Explanation:**

- The Government of India Act, 1935 provided for the creation of a 'Federation of India' that consisted of two levels: a central executive and parliament, and below it, provinces and princely states. So, statement I is correct.
- Dyarchy was introduced at the central level, key subjects like defence and foreign affairs were under the direct control of the Governor General. So, statement 2 is not correct.

■ VAJIRAM & RAVI |

Therefore, option (a) is the correct answer.

Q63. Answer: c Explanation:

- Madhyama Vyayoga is a One-Act play of the Vyayoga type written by Bhasa. It is known for its fast-paced action and easy-flowing humor. In the classical Sanskrit dramatic tradition, the vyayoga was a one-act play with a heroic mood, lacking romantic elements and featuring few feminine roles. "Madhyama" refers to the middle one, in this case, the middle sibling. The play refers to Bhima, the middle son among the three sons of Kunti in the Mahabharata. The plot of the drama revolves around the stay of the Pandavas in a village and their encounter with Hidimba.
- The Sanskrit play Madhyama Vyayoga is attributed to Bhasa, a famous Sanskrit poet. However, there is no
 consensus regarding when the play was written, and it has been dated variously from 475 BCE to the 11th century
 CE
- The Sanskrit poet Nannaya, who lived around 400 CE, has mentioned Bhasa in his works, and this suggests Bhasa may have lived around 350 CE contemporary to the Gupta period.
- Kavyalankara (The Ornaments of poetry) is attributed to Bhamaha who was roughly contemporary with
 Dandin in 7th century CE. Written in the form of instruction for aspiring poets to guide them into the nuances of
 writing a good poem and also defining the qualities of a true poet. Not much was known about this work of
 Bhamaha until 1900s when it attracted the attention of Indologists.
- Natya Shastra is attributed to sage Bharata, and its first complete compilation is dated to between 200 BCE and 200 CE. This book on dance, drama and music is the bible of performing arts in ancient India and defined the standards and rules for the same. (It should have been easily eliminated by aspirants given its reference in ancient art and culture.
- **Mahabhasya** is attributed to **Patanjali**, which is a commentary on selected rules of Sanskrit grammar from Pāṇini's treatise, the Aṣṭādhyāyī, as well as Kātyāyana's **Vārttika-sūtra**, an elaboration of Pāṇini's grammar.

Therefore, option (c) is the correct answer.

Q64. Answer: c Explanation:

- Kashmir was known for being a thriving hub of Buddhist learning in India, particularly for the influential Sarvastivada school. The Kushana rulers played a crucial role in fostering Buddhism in this region, supporting its growth and prominence. **Sanghabhuti**, a prominent Kashmiri scholar, made significant contributions to Buddhism by traveling to China in AD 381. During his time there, he translated numerous Buddhist texts into Chinese, focusing on providing detailed explanations of the Vinaya Pitaka teachings specific to the Sarvastivada School. Sarvastivada school was the earliest orthodox to emerge in Buddhism after the second council at Vaishali. Later it influenced the rise of Hinayana School.
- **Prajnaparamita** is a collection of sutras and their explanations, representing one of the oldest types of Mahayana Buddhism. It greatly expanded on the idea of emptiness (shunyata). Prajnaparamita is symbolized as a female figure embodying wisdom, also known as the Mother of All Buddhas. In these texts, wisdom, now seen as the supreme perfection, is key to reaching nirvana. This wisdom revolves around realizing the illusory nature of all things, not just in this world but also in spiritual realms. The period of significant development for Prajnaparamita ideas lasted from around 100 BCE to 150 CE, with the Astasahasrika Prajnaparamita being a well-known work from this era.
- The Visuddhimagga is a comprehensive and expertly written overview and interpretation of the Mahavihara school of Theravada Buddhism. It was composed by Buddhaghosa, a renowned Buddhist scholar, during the rule of King Mahanama in the 5th century CE. Together with Dhammapala and Buddhadatta, Buddhaghosa produced fresh expositions of Theravada teachings in the Pali language, drawing from ancient Sinhalese commentaries dating back to earlier centuries. This text, among Buddhaghosa's many works, is particularly well-known for categorizing

its content into the themes of morals, concentration, and wisdom, while also elaborating on and clarifying various aspects of Buddhist doctrine by incorporating narratives and direct quotations from the canonical texts of the Tipitaka. It presents Theravada principles in a systematic manner, offering a wealth of information on Buddhist beliefs. Furthermore, the Visuddhimagga furnishes a detailed guide to Buddhist meditation practices, serving as a valuable resource on Theravada doctrine.

The Lalitavistara is a revered text detailing the legendary life of Gautama Buddha. It is a blend of Sanskrit and vernacular language, believed to be a reimagining in the Mahayana tradition from an older work in the Sarvastivada school. Like the Mahavastu, the Lalitavistara features both ancient and more recent content, presenting ancient passages alongside newer additions. Similar to Hindu Puranas in style, the text portrays the Buddha's earthly activities as divine "sport" or "play." Following Mahayana conventions, the text begins with an account of the Buddha in deep meditation, radiating a divine glow, ready to impart the text's teachings to a large audience of monks and aspiring enlightened individuals. The narrative, particularly focused on the Buddha's conception and birth, introduces additional miraculous and mythological elements not previously seen in earlier accounts.

Therefore, option (c) is the correct answer.

O65.

Answer: b **Explanation:**

- According to the UNESCO website, as of January 2024, there are around 1,199 World Heritage Sites, 42 of which are in India.
- In the year 2023, two sites were inscribed on UNESCO WHS list in 2023:
 - Shantiniketan associated with Renowned poet & Nobel Laureate Rabindranath Tagore founded in 1921 as a unique experiment in education that blends Indian and Western cultural influences. So, point I is correct.
 - Sacred Ensembles of the Hoysalas encompass a cluster of ornate Hoysala temples located in the state of Karnataka, India made under Hoysala dynasty which ruled from the 10th to the 14th centuries and was known for its distinctive architectural style, characterized by intricate carvings, soapstone sculptures, and star-shaped plans. So, point 3 is correct.
- Mahabodhi Temple became a UNESCO World Heritage Site in 2002. So, point 4 is not correct.
- Rani-ki-Vav, on the banks of the Saraswati River, was initially built as a memorial to a king in the 11th century AD and was inscribed as UNESCO World Heritage Site in 2014. So, point 2 is not correct.

So, only two of the above properties were included in 2023 in the World Heritage List released by UNESCO. M & RAVI

Therefore, option (b) is the correct answer.

O66.

Answer: d **Explanation:**

 According to Article 368 of the Constitution of India, notwithstanding anything in this Constitution, Parliament may in the exercise of its constituent power amend by way of addition, variation or repeal any provision of this Constitution in accordance with the procedure laid down in this article. So, points 1, 2 and 3 are correct.

Therefore, option (d) is the correct answer.

Q67.

Answer: a **Explanation:**

With the number of over-65s set to more than double by 2050, the world needs to adjust to a new demographic era, according to a World Economic Forum report.

- **Japan** is often name-checked in headlines about ageing populations. With the world's second-largest ageing population, Japan is also contending with a low birth rate. But it's the tiny city-state of Monaco that trumps all other countries in the longevity stakes, with over a third of its roughly 39,000 inhabitants older than 65. **So, point 2 is correct.**
- While **South Korea** does not currently have an ageing population, it may be heading that way. The country's fertility rate is the lowest in the world, with the UN warning in 2021 that South Korea was on track to halve its population by 2100. **So, point 4 is correct.**
- Close to a quarter of **Italy's** population is aged over 65, Statista data shows, ranking it fourth among the world's most ageing societies. As of 2022, 10 Italian regions have a law dedicated to what the World Health Organization terms 'active aging' namely, ensuring that as people age, there are "opportunities for health, participation and security, in order to enhance quality of life". **So, point I is correct.**

Therefore, option (a) is the correct answer.

Q68.

Answer: c Explanation:

- Article 109 of the Constitution of India specifies the special procedure that is to be followed for the consideration
 and passage of Money Bills. So, statement 1 is correct.
- According to Article 110(1), a Money Bill can only be introduced in the Lok Sabha (House of the People) and not in the Rajya Sabha (Council of States). So, statement 2 is correct.
- As per Article 109, the Rajya Sabha can suggest amendments to a Money Bill, but it cannot reject it. It must return the Bill to the Lok Sabha within 14 days with or without amendments. So, statement 3 is correct.
- While the Lok Sabha has the option to accept or reject the amendments suggested by the Rajya Sabha, it is not obligated to accept them. The Lok Sabha may choose to accept some amendments, all amendments, or reject them entirely. So, statement 4 is not correct.

Therefore, option (c) is the correct answer.



Indian Army

Q69.

Answer: d **Explanation:**

The equivalent rank in the three services of Indian defence forces are as follow:

Indian Air Force

So, only 3, Major - Squadron Leader - Lieutenant Commander, is correct. Therefore, option (d) is the correct answer.

Q70. Answer: d **Explanation:**

- The North Eastern Council (NEC) came into being by an Act of Parliament, the North Eastern Council Act, 1971 to act as an advisory body in respect of socio-economic development and balanced development of the North Eastern Areas consisting of the present States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The NEC started functioning in the year 1972.
- The North Eastern Council (NEC) is not a constitutional body, but a statutory organization established under the North Eastern Council Act, 1971, as amended in 2002. Initially, NEC was an Advisory Body for North Eastern Region (NER). Now NEC is mandated to function as a Regional Planning Body for the North Eastern Region. The Council comprises Governors and Chief Ministers of constituent States and three members nominated by the President. So, points 1, 2 and 3 are correct.
- While formulating the regional plans for the North Eastern Region, it is mandated to give priority to schemes and projects, benefitting two or more States, provided that in case of Sikkim, the Council shall formulate specific projects and schemes for that State including the review of implementation of such project and schemes.
- The Union Home Minister is ex-Officio Chairman and the Minister DoNER is the ex-Officio Vice-Chairman of the NEC. So, point 4 is correct.

Therefore, option (d) is the correct answer.

071. Answer: d



- Delimitation means the process of fixing the number of seats and boundaries of territorial constituencies in each State for the Lok Sabha and Legislative assemblies. It also includes determining the seats to be reserved for Scheduled Castes (SC) and Scheduled Tribes (ST) in these houses. Article 82 and 170 of the Constitution provide that the number of seats in the Lok Sabha and State Legislative assemblies as well as its division into territorial constituencies shall be readjusted after each Census.
- This 'delimitation process' is performed by the 'Delimitation Commission' that is set up under an act of Parliament. The Parliament has enacted the Delimitation Commission Acts in 1952, 1962, 1972 and 2002.

Therefore, option (d) is the correct answer.

Q72. Answer: a **Explanation:**

- There have been demands for inclusion of certain languages in the Eighth Schedule to the Constitution. Consequently, the Constitution (Seventy-first Amendment) Act, 1992 was enacted. It included Konkani, Manipuri and Nepali languages in the Eighth Schedule to the Constitution of India.
- The Eighth Schedule to the Constitution consists of the following 22 languages:- (I) Assamese, (2) Bengali, (3) Gujarati, (4) Hindi, (5) Kannada, (6) Kashmiri, (7) Konkani, (8) Malayalam, (9) Manipuri, (10) Marathi, (11) Nepali, (12) Oriya, (13) Punjabi, (14) Sanskrit, (15) Sindhi, (16) Tamil, (17) Telugu, (18) Urdu (19) Bodo, (20) Santhali, (21) Maithili and (22) Dogri.
- Of these languages, 14 were initially included in the Constitution. Sindhi language was added in 1967. Thereafter
 three more languages viz., Konkani, Manipuri and Nepali were included in 1992. Subsequently Bodo, Dogri, Maithili
 and Santhali were added in 2004.

Therefore, option (a) is the correct answer.

Q73.

Answer: b Explanation:

- Dr. Shyama Prasad Mukherjee founded the Bharatiya Jana Sangh on 21st Oct. 1951 at Delhi and he became the
 first President of it. In 1952 elections, Bharatiya Jana Sangh won 3 seats in Parliament one of them being that of
 Shri Mukherjee. So, pair 1 is correctly matched.
- C. Rajagopalachari, popularly known as Rajaji, was associated with the Indian National Congress and later founded the Swatantra Party. The Socialist Party was led by figures like Jayaprakash Narayan and Ram Manohar Lohia, not C. Rajagopalachari. So, pair 2 is not correctly matched.
- Jagjivan Ram was a leader of the Congress for Democracy, which was formed after the split in the Indian National Congress in the early 1970s. So, pair 3 is correctly matched.
- Pair 4 is not a correct match. Acharya Narendra Dev was involved with the Socialist Party. The Swatantra Party was led by figures like C. Rajagopalachari and others. So, pair 4 is not correctly matched.

Therefore, option (b) is the correct answer.

Q74.

Answer: d Explanation:

Originally, the Constitution of India had 395 Articles, 22 Parts, and 8 Schedules. Later 3 parts, namely, 9A Municipalities, 9B Co-operative societies, and 14A tribunals, were added to it as amendments, making the tally 25

- Powers of the Municipalities are given in Part IX A of the Constitution. So, pair I is correctly matched.
- Emergency provisions are given in Part XVIII of the Constitution. So, pair 2 is correctly matched.
- Provisions related to the amendment of the Constitution are given in Part XX of the Constitution.
 So, pair 3 is correctly matched.

Therefore, option (d) is the correct answer.

PART	SUBJECT	ARTICLES						
Part I	The Union and its territory	A- 1 to 4						
Part II	Citizenship	A- 5 to 11						
Part III	Fundamental Rights	A-12 to 35						
Part IV	Directive Principles	A- 36 to 51						
Part IVA	Fundamental Duties (42 nd Amendment Act, 1976)	A- 51A						
Part V	The Union	A- 52 to 151						
Part VI	The States	A- 152 to 237						
Part VII	Repealed by Const. (7th Amendment) Act, 1956) It was about Part B states.							
Part VIII	The Union Territories	A- 239 to 242						
Part 1X	The Panchayats (73th Amendment Act, 1992)	A- 243 to 243O						
Part IXA	The Municipalities (74th Amendment Act, 1992)	A- 243P to 243ZG						
Part IXB	Co-operative Societies (97th Amendment Act, 2011)	A- 243ZH to 243ZT						
Part X	The Scheduled and Tribal Areas	A- 244 to 244A						
Part XI	Relations between the Union and the States	A- 245 to 263						
Part XII	Finance, Property, Contracts and Suits	A- 264 to 300A						
Part XIII	Trade, Commerce and Intercourse within the Territory of India	A- 301 to 307						
Part XIV	Services under the Union and the States	A- 308 to 323						
Part XIVA	Tribunals (42 nd Amendment Act, 1976)	A- 323A to 323B						
Part XV	Elections	A- 324 to 329A						
Part XVI	Special provisions relation to certain classes	A- 330 to 342						
Part XVII	Official Language	A- 343 to 351						
Part XVIII	Emergency Provisions	A- 352 to 360						
Part XIX	Miscellaneous	A- 361 to 367						
Part XX	Amendment of the Constitution	A- 368						
Part XXI	Temporary, Transitional and Special Provisions	A- 369 to 392						
Part XXII	Short title, commencement, authoritative text in Hindi and repeals	A- 393 to 395						

Q75.

Answer: c Explanation:

- Inter-State trade and commerce is specifically mentioned under Entry 42 of the Union List (List I) in the Seventh Schedule of the Constitution of India. Therefore, it is a Union subject.
- Inter-State migration, which involves movement of people across state boundaries within India, falls under Entry 81 of the Union List (List I). Hence, it is a Union subject.
- Inter-State quarantine, which involves measures for preventing the spread of diseases across state boundaries, is covered under entry 81 of the Union List (List I). Therefore, it is a subject within the exclusive domain of the Union government.
- Fourth statement is incorrect. Corporation tax, which is a form of direct taxation on the income of companies and corporations, falls under Entry 85 of the Union List (List I). Hence, it is under the jurisdiction of the Union government.

Therefore, option (c) is the correct answer.

Q76.

Answer: d

Explanation: In the landmark case of Justice K.S. Puttaswamy (Retd.) vs Union of India (2017), a nine-judge bench of the Supreme Court unanimously held that the right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 of the Constitution of India.

Therefore, option (d) is the correct answer.

Q77.

Answer: d Explanation:

- The Chief of Defence Staff (CDS) serves as the Permanent Chairman of the Chiefs of Staff Committee (COSC), which includes the three Service Chiefs (Army, Navy, Air Force). So, statement 1 is correct.
- The CDS does not exercise military command over the three Service Chiefs. Each Service Chief retains operational command over their respective service. **So, statement 2 is not correct.**
- The CDS acts as the Principal Military Advisor to the Defence Minister on all tri-service matters. So, statement 3 is correct.

Therefore, option (d) is the correct answer.

Q78.

Answer: c Explanation:

- "Sadbhavana" literally means "goodwill among people." The Indian Army has evolved a military strategy of winning hearts and minds, with this being just a phase in the broader war on terror.
- Operation Sadbhavana focuses on actions to address the border regions of Ladakh in the Himalayas. The government of India, in remote areas, strives against difficult conditions to provide essential services (including health care) to its population in an equitable manner.
- In the backdrop of the deteriorating security situation in the Gulf region, post attacks on merchant ships in the Gulf of Oman in June 2019, Indian Navy had commenced Maritime Security Operations, code named **Op SANKALP**, in the Gulf Region to ensure safe passage of Indian Flag Vessels transiting through the Strait of Hormuz.
- Operation Maitri was a rescue and relief operation in Nepal by the government of India and Indian armed forces
 in the aftermath of the April 2015 Nepal earthquake.

• Operation "Madad" has been launched by the Southern Naval Command (SNC) at Kochi since 09 Aug 2018 for assisting the state administration and undertaking disaster relief operations due to the unprecedented flooding experienced in many parts of Kerala.

Therefore, option (c) is the correct answer.

Q79.

Answer: a Explanation:

- The longest land border between two countries is the border between Canada and the United States, which
 is 8,890 kilometers long. This includes the border between Alaska and northern Canada, as well as the border
 between Canada and the continental United States.
- Other long borders between countries include:
 - o Russia and Kazakhstan: 6,846 kilometers
 - o Chile and Argentina: 5,308 kilometers
 - o India and Bangladesh: 4,142 kilometers

Therefore, option (a) is the correct answer.

Q80.

Answer: c Explanation:

- The Committee of Privileges had recommended the constitution of an Ethics Committee during the 13th Lok Sabha. The late Speaker, G M C Balayogi, constituted an ad hoc Ethics Committee in 2000, which became a permanent part of the House only in 2015. So, statement 1 is correct.
- As per Rule 233A (I) of Chapter XXA, any person or member may make a complaint relating to unethical conduct of a member of Lok Sabha. Provided that if a complaint is made by any person, it shall be forwarded by a member. So, statement 2 is not correct.
- As per Rule 233A (10) of Chapter XXA, the Committee on Ethics shall not take up any matter which is subjudice and the decision of the Committee as to whether such matter is or is not subjudice shall for the purposes of these rules be treated as final. So, statement 3 is correct.

Therefore, option (c) is the correct answer.

Q81.

Answer: c Explanation:

- The Constitution (One Hundred and Sixth Amendment) Act, 2023 (also known as, 'Nari Shakti Vandan Adhiniyam') was passed in Parliament recently. It seeks to reserve one-third of the total number of seats in Lok Sabha and state legislative assemblies for women.
- Key features of the Bill:
 - Reservation for women: It reserves, as nearly as may be, one-third of all seats for women in Lok Sabha, state legislative assemblies, and the Legislative Assembly of the National Capital Territory of Delhi. This will also apply to the seats reserved for SCs and STs in Lok Sabha and states legislatures.
 - Commencement of reservation: The reservation will be effective after the census conducted after the commencement of this Act has been published. Based on the census, delimitation will be undertaken to reserve seats for women. The reservation will be provided for a period of 15 years. However, it shall continue till such date as determined by a law made by Parliament. So, statement 1 is not correct and statement 2 is correct.
 - Rotation of seats: Seats reserved for women will be rotated after each delimitation, as determined by a law made by Parliament.

o It provides for the reservation of seats for Scheduled Castes/Scheduled Tribes Women within the quota reserved for Scheduled Castes/Scheduled Tribes respectively. **So, statement 3 is correct.**

Therefore, option (c) is the correct answer.

Q82. Answer: d Explanation:

- The ninth edition of the Joint Military exercise between India and Sri Lanka named "Exercise MITRA SHAKTI-2023" was conducted in 2023. For the first time this year, Special Forces commandos from Armies and Air Forces of both countries were part of the joint teams. **So, statement I is not correct.**
- It commenced at the Foreign Training Node at the Aundh Military Station in Pune. **So, statement 2 is correct.**
- The scope of the exercise includes synergising joint responses during counter-terrorist operations. Both sides will practice tactical actions such as raid, search and destroy missions, and heliborne operations. In addition, Army Martial Arts Routine (AMAR), combat reflex shooting and yoga will also form part of the exercise curriculum during this edition. **So, statement 3 is correct.**
- For the first time this year, Special Forces commandos from Armies and Air Forces of both countries were part of the joint teams. So, statement 4 is correct.

Therefore, option (d) is the correct answer.

Q83.

Answer: c Explanation:

- Prohibition means 'to forbid'. It is issued by a higher court to a lower court or tribunal to prevent the latter from exceeding its jurisdiction or usurping a jurisdiction that it does not possess. The writ of prohibition can be issued only against judicial and quasi-judicial authorities.
- It is issued when the lower court or tribunal acts without or in excess of jurisdiction or in violation of rules of natural justice or in contravention of fundamental rights. It can also be issued when a lower court or tribunal acts under a law that is itself ultra vires.

Therefore, option (c) is the correct answer.

Q84.

Answer: b Explanation:

- The President may, with respect to any State or Union territory, after consultation with the Governor specify the
 community who is deemed to be scheduled tribes in relation to that state or Union Territory. So, Statement I
 is not correct.
- While the Constitution is silent about the criteria for specification of a community as a Scheduled Tribe. The
 words and the phrase 'tribes or tribal communities or part of or groups within tribes or tribal communities" in
 Article 342 have to be understood in terms of their historical background of backwardness.
- Primitiveness, geographical isolation, shyness and social, educational & economic backwardness due to these
 reasons are the traits that distinguish Scheduled Tribe communities of our country from other communities. It
 takes into account the definitions of tribal Communities adopted in the 1931 Census. These facts are the basis for
 the provision in Article 342(1) which mandates to specify the tribes or tribal communities or part of or groups
 within tribes or tribal communities as Scheduled Tribe in relation to that State or Union Territory as the case may
 be.

• Thus the list of Scheduled Tribes is State/UT specific and a community declared as a Scheduled Tribe in a State need not be so in another State. The Presidential notifications under Clause I of Article 342 of the Constitution are issued as the Constitution Orders. **So, Statement 2 is correct.**

Therefore, option (b) is the correct answer.

Q85.

Answer: b Explanation:

- As per Article II2 of the Constitution of India, for every financial year, the President shall cause to be laid before both Houses of Parliament a statement of the estimated receipts and expenditure of the Government of India for that year which would be referred to as annual financial statement. The Union Finance Minister on behalf of the President of India lays the Annual Financial Statement before both the Houses of Parliament. So, statement I is not correct.
- As per Article 113, no demand for a grant shall be made except on the recommendation of the President of India.
 So, statement 2 is correct.

Therefore, option (b) is the correct answer.

Q86.

Answer: d Explanation:

Subrahmanyam Jaishankar is a prominent Indian diplomat and politician who currently serves as the Minister of External Affairs of India.

- He authored the book "The India Way: Strategies for an Uncertain World," which outlines his vision and thoughts on India's foreign policy and global strategy.
- "Why Bharat Matters" is Jaishankar's second book in which he provided his analysis of India's geopolitical strategy since independence, along with India's historical statecraft and the impact of colonisation.

Therefore, option (d) is the correct answer.



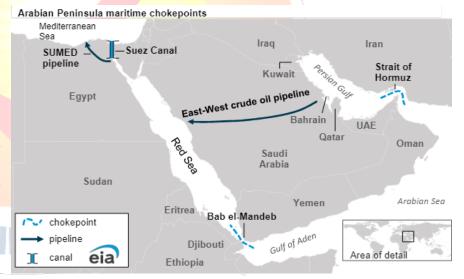
Q87. Answer: b Explanation:

- **Argentina** faced another severe economic crisis starting in 2018, characterized by a sharp devaluation of the peso, high inflation, and a deep recession. The country entered into a \$57 billion loan agreement with the International Monetary Fund (IMF), the largest in the IMF's history. However, economic instability continued, with rising poverty rates and social unrest. **So, pair I is correctly matched.**
- The ongoing conflict in **Sudan** involves the country's regular army, the Sudanese Armed Forces (SAF), and a powerful paramilitary group called the Rapid Support Forces (RSF). In April 2023, open warfare erupted between the SAF and the RSF. The conflict has caused widespread devastation, with thousands of civilians killed and millions displaced. The fighting has been characterized by heavy urban combat, airstrikes, and artillery shelling, leading to severe humanitarian crises in cities like Khartoum and Omdurman. **So, pair 2 is correctly matched.**
- NATO was established in 1949 and **Turkey** joined NATO in 1952. Turkey's role within NATO constantly increased since the end of the Cold War. All NATO members need to approve applications from countries seeking to join the alliance. When Sweden and Finland asked to join in 2022, Turkey raised objections. In January 2024, Turkey finally backed Sweden's NATO bid for its inclusion. **So, pair 3 is not correctly matched.**

So, only two of the above pairs are correctly matched. Therefore, option (b) is the correct answer.

Q88. Answer: a Explanation:

- The Suez Canal, the SUMED pipeline, and the Bab el-Mandeb Strait are strategic routes for Persian Gulf oil and natural gas shipments to Europe and North America. Total oil these shipments via routes accounted for about 12% of total seaborne-traded oil in the first half of 2023, and liquefied natural gas (LNG) shipments accounted for about 8% of **LNG** worldwide trade. So, statement I is correct.
- The Suez Canal and SUMED pipeline are located in Egypt and connect the Red Sea with the Mediterranean Sea



Red Sea with the Mediterranean Sea. The SUMED pipeline transports crude oil north through Egypt and has a capacity of 2.5 million barrels per day. **So, statement 2 is correct.**

Therefore, option (a) is the correct answer.

Q89.

Answer: c Explanation:

Red Sea, narrow strip of water extending southeastward from Suez, Egypt, for about 1,200 miles (1,930 km) to the Bab el-Mandeb Strait, which connects with the Gulf of Aden and thence with the Arabian Sea.

The Red Sea contains some of the world's hottest and saltiest seawater. With its connection to the Mediterranean
Sea via the Suez Canal. Because, The Red Sea region receives very little precipitation in any form. So,
statement I is correct.

• No water enters the Red Sea from rivers, and rainfall is scant; but the evaporation loss—in excess of 80 inches per year—is made up by an inflow through the eastern channel of the Bab el-Mandeb Strait from the Gulf of Aden. So, statement 2 is correct.

Therefore, option (c) is the correct answer.

Q90.

Answer: d Explanation:

Sulfur dioxide (SO2) is a colorless, reactive air pollutant with a strong odor. This gas can be a threat to human health, animal health & plant life. The gas contributes to the formation of acid rain and in high concentrations can cause respiratory problems.

- The largest source of SO2 in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. Smaller sources of SO2 emissions include: industrial processes such as extracting metal from ore; natural sources such as volcanoes; & locomotives, ships & other equipment that burn fuel with a high sulfur content.
- According to a report by Greenpeace (an environmental Non-Governmental Organization), India is the largest emitter of Sulphur Dioxide (SO2) in the world, contributing more than 15% of global anthropogenic emissions.

Therefore, option (d) is the correct answer.

Q91. Answer: a Explanation:

The Sahel region is spanning the area from Senegal to Eritrea, situated between the Sahara to the north and the African tropics to the south, the Sahel region has long faced severe, complex security and humanitarian crises.

- have Sahel experienced violent extremism due to the confluence illegitimate of weak and governance, economic decline, and the effects of climate worsening change. Violence, conflict, and crime have surged over the last decade, transcending national borders and posing significant challenges to countries both in and outside the region. So, statement I is correct.
- The epicenters of violence and 0 500 10 humanitarian disaster are in the Liptako-Gourma and Lake Chad Basin subregions.
- SENEGAL

 BURKINA
 FASO

 NIGERIA

 CAMEROON

 CAMEROON

 SUDAN

 ETHIOPIA

 SOUTH
 SUDAN

 O 500 1000 1500
- Liptako-Gourma is in the central Sahel, in the borderlands of Burkina Faso, Mali, and Niger. Current instability is associated with the collapse of the Libyan state in 2011, which led to the proliferation of weapons and armed fighters in the region. **So, statement 2 is correct.**
- Violent extremism in the Lake Chad Basin at the intersection of Cameroon, Chad, Niger, and Nigeria prevailed in the same period with the reemergence of Boko Haram in northern Nigeria.
- In 2023, security forces in Mali and Burkina Faso faced allegations of civilian massacres.

Therefore, option (a) is the correct answer.

Q92.

Answer: d **Explanation:**

- After India removed 'retaliatory import duty' on US apples in September, imports of American apples have surged 40 times in three months, while traders are hopeful of regaining market share. In 2017-18, the import of US apples was a record of over 7 million boxes, which dropped to 50,000 boxes in the 2022–23 (September-August) season. So, statement I is not correct.
- In India, the Food Safety and Standards Act, 2006, prohibits import, manufacture, use or sale of GM food without FSSAI's approval. I I Nov. So, statement 2 is correct.

Statement-I is incorrect but Statement-II is correct.

Therefore, option (d) is the correct answer.

Q93.

Answer: a **Explanation:**

- When any resolution for the removal of the Speaker of the Lok Sabha is under consideration, he cannot preside at the sitting of the Lok Sabha. However, he may be present in the house. **So, Statement I is correct**.
- When any resolution for the removal of the Speaker of the Lok Sabha is under consideration, he can speak and take part in the proceedings of the House. So, Statement 2 is incorrect.
- When any resolution for the removal of the Speaker of the Lok Sabha is under consideration, he is entitled to vote in the first instance and not in the case of an equality of votes. So, Statement 3 is incorrect.

Therefore, option (a) is the correct answer.

Q94.

Answer: b **Explanation:**

- When the Lok Sabha is dissolved, a bill pending in the Lok Sabha lapses (whether originating in the Lok Sabha or transmitted to it by the Rajya Sabha). So, Statement I is correct.
- When the Lok Sabha is dissolved, a bill passed by the Lok Sabha but pending in the Rajya Sabha lapses. So, Statement 2 is correct.
- When the Lok Sabha is dissolved, a bill does not lapse if the President has notified the holding of a joint sitting before the dissolution of Lok Sabha. So, Statement 3 is incorrect.

Therefore, option (b) is the correct answer. JIRAM & RAVI

Q95.

Answer: c **Explanation:**

- Under Article 85(2) of the Constitution of India, the President may from time to time prorogue Houses or either House of Parliament. Termination of a session of the House by an Order by the President under the above constitutional provision is called 'prorogation'. The President exercises this power of Prorogation of the Houses only on the recommendation of the Prime Minister or the Cabinet i.e. the Council of Ministers. So, Statement I is incorrect.
- Prorogation normally follows the adjournment of the sitting of the House sine die. The time-lag between the adjournment of the House sine die and its prorogation is generally two to four days. However, the President can also prorogue the House while in session. So, Statement 2 is correct.
- The President of India can dissolve the Lok Sabha before the expiry of its term on the advice of the Union Council of Ministers. So, Statement 3 is correct.

Therefore, option (c) is the correct answer.

Q96.

Answer: c Explanation:

- The European Parliament has approved the **Net-Zero Industry Act** to enhance net-zero technology production within the European Union. The Act targets Europe to produce 40% of its net-zero technology needs by 2030 and capture 15% of the global market for these technologies. **So, statement I is correct.**
- The European Union intends to achieve carbon neutrality by 2050 and therefore aims to develop all of its own clean technology by that time. **So, statement 2 is not correct.**

Therefore, option (c) is the correct answer.

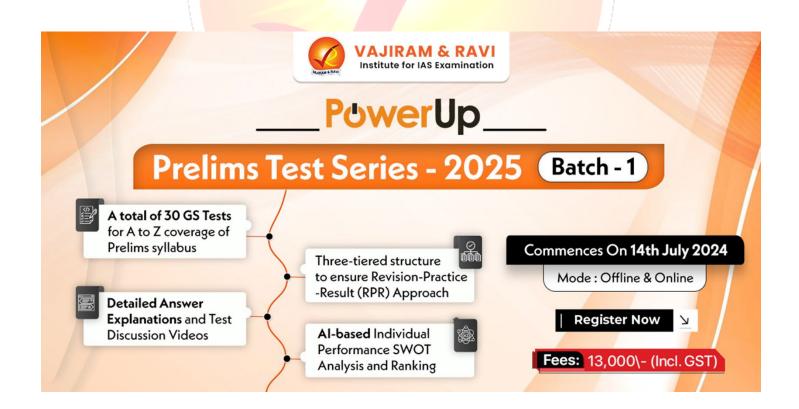
Q97.

Answer: d Explanation:

- The crisis in Venezuela continues to escalate, with no recovery or relief in sigh. More than 7.7 million people have fled Venezuela, seeking food and better living conditions. Venezuela has not achieved a rapid recovery from its economic crisis and has not been successful in preventing its people from fleeing/emigrating to other countries.

 So, statement I is not correct.
- According to the 2022 BP Statistical Review of World Energy, Venezuela has more proved oil reserves than any other country in the world. Venezuela is currently the country with the largest proven oil reserves in the world, with an estimated 300 billion barrels of oil. So, statement 2 is correct.

Therefore, option (d) is the correct answer.



Q98.

Answer: d Explanation:

- Digital India Land Records Modernization Programme (erstwhile National Land Record Modernization Programme-) was revamped and converted as a Central Sector Scheme with effect from 1st April, 2016 with 100% funding by the Centre. So, statement 1 is correct.
- 68.02 percent **Cadastral Maps have been digitized** (2,49,57,221 maps out of total 3,66,92,728 maps), 94.95 per cent Computerization of Registration completed (5060 Sub-Registrar Offices out of total 5,329 SROs) and 87.48 per cent Integration of Sub Registrar offices(SROs) with Land Records have been completed (4,662 SROs out of total 5329 SROs). **So, statement 2 is correct.**
- The Government with the technical support of Centre for Development of Advanced Computing (C-DAC) Pune, has undertaken an initiative to transliterate the Records of Rights available in local language to any of the 22 Schedule VIII languages of the Constitution. Pilot test is underway in 8 States Bihar, Maharashtra, Gujarat, Puducherry, Uttar Pradesh, Tamil Nādu, Tripura and UT of Jammu & Kashmir. So, statement 3 is correct.

Therefore, option (d) is the correct answer.

Q99.

Answer: b Explanation:

- Government of India launched "Pradhan Mantri Surakshit Matritva Abhiyan" (PMSMA) with an aim to provide
 fixed-day, free of cost, assured, comprehensive and quality antenatal care on the 9th day of every month universally
 to all pregnant women in their 2nd / 3rd trimesters of pregnancy. So, statement I is not correct.
- The programme follows a systematic approach for engagement with the private sector which includes motivating private practitioners to volunteer for the campaign developing strategies for generating awareness and appealing to the private sector to participate in the Abhiyan at government health facilities. So, statement 2 is correct.

Therefore, option (b) is the correct answer.

Q100.

Answer: b Explanation:

- To become eligible to avail benefits of the PM-SYM Yojana, a person should be:
 - An unorganised worker
 - Entry age between 18 and 40 years
 - Monthly Income Rs 15000 or below. So, statement 1 is not correct.
- It is a voluntary and contributory pension scheme under which the beneficiary would receive a minimum assured pension of Rs 3000/- per month after attaining the age of 60 years. **So, statement 2 is correct.**
- During the receipt of pension, if the subscriber dies, the spouse of the beneficiary shall be entitled to receive 50% of the pension received by the beneficiary as family pension. **Family pension is applicable only to spouse** Subscriber needs to contribute in the range of Rs. 55 Rs. 200 depending on the entry age specific monthly contribution. **So, statement 3 is correct and 4 is not correct.**

Therefore, option (b) is the correct answer.



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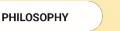
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