

Gupta Kings for permission to build a Buddhist temple at Gaya?

- (a) Chandragupta II (b) Samudragupta
(c) Chandragupta I (d) None of them

17 When was Bihar first separated from the Bengal Presidency under the British-ruled India?

- (a) 1947 (b) 1936
(c) 1912 (d) None of the above

18 In Indian art, the construction of 'Stupa', 'Chaitya' and 'Vihara' is related to which of the following?

- (a) Vaishnava sect (b) Buddhism
(c) Shaiva sect (d) Ajivika sect

19 In the context of Indian handicrafts, what is 'Sujini' in Bihar?

- (a) A metal craft (b) A type of embroidery
(c) A type of clay pottery (d) A type of glassware

20 Consider the following statements regarding the Vikramshila University in Bihar:

- (1) It was located in the present-day Banka district of Bihar.
(2) It was established by King Gopala I of the Pala dynasty.
(3) The Vajrayana' sect of Buddhism flourished here.
(4) Other subjects like Astronomy, Logic, Law, Grammar and Philosophy were also taught here.

Which of the above statements are incorrect?

- (a) 1 and 2 (b) 1 and 4
(c) 2 and 3 (d) None of the above

21 Which of the following National Parks/Wildlife Sanctuaries are in Bihar?

- (1) Valmiki National Park
(2) Dudhwa National Park
(3) Gajner Wildlife Sanctuary
(4) Bhimbandh Wildlife Sanctuary

Select the correct answer using the codes given below.

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

22 Consider the following statements regarding the 'Gangetic Dolphin':

- (1) The Gangetic River Dolphin has been categorized as 'endangered' under the IUCN's Red List.
(2) It does not have a crystalline eye lens rendering it effectively blind.
(3) Navigation and hunting are carried out using echolocation.
(4) It has been recognized as India's National Aquatic Animal.

Which of the above statements are correct?

- (a) Only 1, 3 and 4 (b) Only 2, 3 and 4
(c) Only 1, 2 and 4 (d) All of the above

23 The other name of river Gandak is:

- (a) Mahananda (b) Narayani
(c) Punpun (d) Burhi Gandak

24 Gold is found in which of the following districts of Bihar?

- (a) Saran (b) Siwan
(c) Jamui (d) Munger

25 The Triveni Canal has been constructed on which of the following rivers?

- (a) Sone (b) Gandak
(c) Mayurakshi (d) Kosi

26 Assertion (A): Rich placer deposits of gold are found on the Ghana coast and gold-bearing veins are found in Brazil.

Reason (R): At some points of time, these continents were joined together along the Atlantic coast.

Select the correct answer.

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

27 Bihar's geographical structure consists of rock systems. Match the rock systems with their descriptions:

(A)	Dharwar rock system	1.	Created by the rapid deposition of alluvium by Himalayan and Peninsular rivers
(B)	Vindhyan rock system	2.	Can be found in the West Champaran district
(C)	Quaternary rock system	3.	Part of the oldest Archaean rock system
(D)	Tertiary rock system	4.	Sandstone, limestone, dolomite, quartzite and shale are the main constituents of this rock system

Select the correct answer using the codes given below.

- | | A | B | C | D |
|-----|---|---|---|---|
| (a) | 1 | 3 | 2 | 4 |
| (b) | 2 | 3 | 4 | 1 |
| (c) | 4 | 2 | 3 | 1 |
| (d) | 3 | 4 | 1 | 2 |

28 Which one of the following is the world's richest region from a marine biodiversity perspective, comprising twenty-one islands with estuaries, beaches, forests of the near-shore environment, sea grasses, coral reefs, salt marshes and mangroves?

- (a) Nanda Devi Biosphere Reserve
(b) Sunderbans Biosphere Reserve
(c) Nilgiri Biosphere Reserve
(d) Gulf of Mannar Biosphere Reserve

29 What is the local time of Thimphu (Bhutan) located at 90° East longitude when the time at Greenwich (0°) is 12:00 noon?

- (a) 4:00 p.m. (b) 7:00 p.m. (c) 6:00 a.m. (d) 6:00 p.m.

30 Which of the following statements is correct?

- (a) Mica is found in Kodarma.
(b) Cuddapah series is famous for diamonds.
(c) Petroleum reserves are found in Aravalli hills.
(d) Natural gas is found in Dharwar rock formation.

31 How many latitudes are there on the globe drawn at 1 degree interval?

- (a) 179 (b) 178
(c) 180 (d) None of the above

- 32** The average height of the Kosi plain from mean sea level is:
 (a) 30 m (b) 150 m
 (c) 300 m (d) None of the above

- 33** On which plateau, the Tropic of Cancer and the Indian Standard Time Line intersect each other?
 (a) Malwa (b) Baghelkhand
 (c) Bundelkhand (d) None of the above

- 34** Which district of Uttarakhand is not situated along the Tibbet boundary?
 (a) Almora (b) Chamoli
 (c) Uttarkashi (d) None of the above

- 35** Where does the El Niño current flow?
 (a) The Bay of Bengal
 (b) The Indian Ocean
 (c) The Pacific Ocean
 (d) More than one of the above

- 36** Consider the following statements:
 (1) Lake Victoria is the third largest freshwater lake in the world by surface area.
 (2) It is one of the great lakes of Africa.
 (3) It is bordered by four countries-Tanzania, Uganda, Rwanda and Kenya.
 (4) The only outflow from Lake Victoria is the Nile River, which exits the lake near Jinja, Uganda.

Which of the above statements are incorrect?

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

- 37** Consider the following statements regarding 'heat wave':
 (1) Heat wave is considered if the maximum temperature of a station reaches at least 30 °C or more for plains.
 (2) Heat wave is considered if the maximum temperature of a station reaches at least 40°C or more for hilly regions.

Which of the above statements is/are correct?

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

- 38** Match List-I with List-II :

List-I (Explorer)		List-II (Birthplace)	
(A)	Christopher Columbus	1.	Portugal
(B)	Jacques Cartier	2.	United Kingdom
(C)	Sir Francis Drake	3.	Italy
(D)	Ferdinand Magellan	4.	France

Select the correct answer using the codes given below.

- | | | | | |
|-----|----------|----------|----------|----------|
| | A | B | C | D |
| (a) | 1 | 2 | 4 | 3 |
| (b) | 3 | 4 | 1 | 2 |
| (c) | 1 | 4 | 2 | 3 |
| (d) | 3 | 4 | 2 | 1 |

- 39** The emirates of UAE are:
 (a) Dubai, Sharjah, Ajman, Jeddah, Kuwait, Bahrain, Umm Al-Quwain
 (b) Umm Al-Quwain, Fujairah, Ras Al-Khaimah, Riyadh, Dammam, Taif, Dubai
 (c) Sharjah, Abu Dhabi, Ajman, Fujairah, Dubai, Bahrain Kuwait

- (d) Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Quwain, Fujairah, Ras Al-Khaimah

- 40** The river Subarnarekha originates near which of the following villages?

- (a) Mandar (b) Hehal (c) Nagri (d) Ormanjhi

- 41** The specifications required for a community to be declared as a Scheduled Tribe are:

- (1) Indications of primitive traits
 (2) Distinctive culture
 (3) Shyness of contact with the community at large
 (4) Backwardness and geographical isolation

Which of the above are correct?

- (a) Only 1, 3 and 4 (b) Only 2, 3 and 4
 (c) Only 1 and 2 (d) All of the above

- 42** From which country, the Indian Constitution has taken reference for the idea of the Fundamental Rights?

- (a) United States of America (b) United Kingdom
 (c) Canada (d) Ireland

- 43** Untouchability is abolished by which Article of the Indian Constitution?

- (a) Article 15 (b) Article 17
 (c) Article 22 (d) Article 14

- 44** The authority to determine the number of Judges in a High Court rests with which of the following entities?

- (a) The Chief Minister of the State
 (b) The Prime Minister
 (c) The Parliament
 (d) The President

- 45** The Fifth Schedule deals with the governance and protection of the interests of which specific group of people?

- (a) Religious Minorities (b) Scheduled Tribes
 (c) Linguistic Minorities (d) Scheduled Castes

- 46** In which case(s) did the Supreme Court of India give for the first time the doctrine of 'basic structure' of the Constitution?

- (a) Golaknath vs. State of Punjab
 (b) Kesavananda Bharati vs. State of Kerala
 (c) Minerva Mills vs. Union of India
 (d) Both (a) and (b)

- 47** Match the following political parties listed in List-I with their years of establishment in List-II:

List-I (Political Parties)		List-II (Years of Establishment)	
(A)	Communist Party of India (Marxist)	1.	1964
(B)	Communist Party of India	2.	1998
(C)	Bahujan Samaj Party	3.	1925
(D)	All India Trinamool Congress (AITC)	4.	1984

Select the correct answer using the codes given below.

- | | | | | |
|-----|----------|----------|----------|----------|
| | A | B | C | D |
| (a) | 2 | 1 | 4 | 3 |
| (b) | 2 | 1 | 3 | 4 |
| (c) | 3 | 4 | 1 | 2 |
| (d) | 1 | 3 | 4 | 2 |

48 Under which Article(s), the Speaker can allow any member of the House to speak in his/her mother tongue?

- (a) Article 110 (1) (b) Article 122 (2)
(c) Article 120 (1) (d) Both (a) and (b)

49 Consider the following statements about the collegium system:

- (1) The Supreme Court collegium is a five-member body, which is headed by the incumbent Chief Justice of India (CJI) and comprises four other senior most Judges of the Court at that time.
- (2) The Parliament by law has evolved the collegium system.
- (3) The Judges of the Supreme Court and High Courts are appointed only through the collegium system.
- (4) The collegium system was introduced in the year 1993 by Justice P. N. Bhagwati in the landmark First Judges Case.

Which of the above statements is/are correct?

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

50 Consider the following statements regarding the 42nd Amendment to the Constitution of India:

- (1) It added three words to the Preamble—'Socialist', 'Secular' and 'Integrity'.
- (2) It added eight Fundamental Duties to the Constitution.
- (3) It added new Directive Principles, i.e., Article 39A, Article 43A and Article 47.
- (4) It granted power to the President, in consultation with the Election Commission, to disqualify members of the State Legislatures.

Which of the above statements are incorrect?

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

51 Consider the following statements regarding insolvency and bankruptcy:

- (1) Bankruptcy refers to a financial state in which an individual or entity is unable to pay off their debts as they become due.
- (2) Insolvency refers to a legal process, where the assets of the debtor are liquidated or reorganized for the benefit of creditors.
- (3) Bankruptcy is a state whereas insolvency is the conclusion.
- (4) The Insolvency and Bankruptcy Board of India (IBBI) is the regulatory body responsible for overseeing insolvency and bankruptcy proceedings.

Which of the above statements is/are correct?

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

52 In which year was the Industrial Policy Resolution adopted?

- (a) 1954 (b) 1952
(c) 1950 (d) 1956

53 Consider the following statements about the Production-Linked Incentive (PLI) scheme:

- (1) The scheme offers a production-linked incentive to boost domestic manufacturing and attract large investments in mobile phone manufacturing and specified electronic components.
- (2) The scheme has two categories of applicants, namely, global companies and domestic companies.

(3) The scheme shall extend an average incentive of around 8% on net incremental sales (over base year) of goods manufactured in India and covered under the target segment, to eligible companies, for a period of six years.

(4) The target segment under PLI shall include (i) laptops, (ii) tablets, (iii) all-in-one PCs, (iv) servers and (v) Ultra-Small Form Factor (USFF).

Which of the above statements are incorrect?

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

54 Consider the following statements regarding the SVAMITVA scheme:

- (1) It is a Central Sector Scheme under the Ministry of Mines.
- (2) This scheme seeks to create geospatial infrastructure like CORS network to benchmark the location and provides five centimetre level accuracy.
- (3) CORS means Cross-Origin Resource Sharing.
- (4) The scheme is a reformative step towards establishment of clear ownership of property in rural inhabited (Abadi) areas, by mapping of land parcels using drone technology.

Which of the above statements are incorrect?

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

55 Which of the following is/are the consequence(s) of invoking Article 360, declaration of a financial emergency?

- (1) The President may order the States to reduce the salaries and allowances of all or any class of employees serving in connection with the State affairs.
- (2) Money Bills or other financial bills passed by the State Legislature are not required to be reserved for the consideration of the President.
- (3) The President can issue directions for the reduction of salaries and allowances of all or any class of employees serving in connection with the affairs of the Union, including the Judges of the Supreme Court and the High Courts.
- (4) Money Bills or other financial bills are to be reserved for the consideration of the President after they are passed by the Legislature of the State.

Select the correct answer using the codes given below.

- (a) Only 1 and 2 (b) Only 2
(c) Only 1, 3 and 4 (d) All of the above

56 Which of the following factors could potentially contribute to stagflation in the Indian economy?

- (1) High inflationary pressures due to increased Government spending
- (2) Decline in industrial production and sluggish economic growth
- (3) Decrease in aggregate demand and consumer spending
- (4) Appreciation of the domestic currency leading to reduction of export competitiveness

Select the correct answer using the codes given below.

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

57 As per the Economic Survey, 2023, which of the following statements describe(s) the trend of Foreign Direct Investment in India?

- (1) It has decreased due to the less participation of the private sector.
- (2) It has increased compared to the pre-pandemic levels.
- (3) It has increased rapidly without decreasing in any Financial Year after the telecom sector was entirely reformed.
- (4) It has decreased due to a weak global economic situation.

Select the correct answer using the codes given below.

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

58 What is the current population of Gaya district of Bihar?

- (a) 3,20,000 (b) 7,80,000
(c) 2,34,000 (d) 5,98,000

59 Which of the following statements about non-plan expenditures of the Central Government is correct?

- (a) The expenditure is on agriculture.
- (b) The expenditure is on science and technology.
- (c) The expenditure is on interest payments.
- (d) None of the above

60 Which of the following is not true about globalization and its impact on India?

- (a) Increase in exports is greater than increase in imports.
- (b) It has led to greater flow of Foreign Direct Investment.
- (c) It has expanded trade in goods and services.
- (d) None of the above

61 Consider the following statements about the latest developments in the Union Government finances:

- (1) The fiscal deficit of the Union Government had reached 9.2 percent of GDP during the pandemic FY21.
- (2) The fiscal deficit has moderated to 7.7 percent of GDP in FY22.
- (3) The revenue collection over the last two years has gone down.

Which of the above statements is/are correct?

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

62 The Foreign Exchange Reserves (FER) of RBI include which of the following?

- (1) Foreign Currency Assets (FCA)
- (2) Gold
- (3) Special Drawing Rights (SDR)
- (4) Reserve Tranche Position

Select the correct answer using the codes given below.

- (a) Only 1, 2 and 3 (b) Only 2, 3 and 4
(c) Only 1 and 2 (d) All of the above

63 Consider the following statements about 'Rules of Origin':

- (1) Rules of Origin are the criteria needed to determine the national source of a product.
- (2) Rules of Origin help the custom agencies to know what regulations and fees apply to a given product.
- (3) These are used for the purpose of trade statistics.
- (4) Their importance is derived from the fact that duties and restrictions in several cases depend upon the sources of imports.

Which of the above statements are correct?

- (a) Only 1, 3 and 4 (b) Only 3 and 4
(c) Only 1 and 2 (d) All of the above

64 Consider the following statements about infant mortality rate:

- (1) It is the probability of dying between birth and exactly 1 year of age, expressed per 10000 live births.
- (2) The infant mortality rate in the year 1950 was 189.6.
- (3) In the year 2019, the infant mortality rate was 30.
- (4) As per the Sample Registration System (SRS) Bulletin of Registrar General of India (RGI), the State with the highest infant mortality rate in the year 2019 was Uttar Pradesh.

Which of the above statements are correct?

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

65 Human capital formation as a concept is better explained in terms of a process, which enables:

- (1) Individuals of a country to accumulate more capital
- (2) Increasing the knowledge
- (3) Increasing the skill levels
- (4) Increasing the knowledge, skill levels and capacities of the people of the country

Select the correct answer using the codes given below.

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

66 The Bakasht Movement in Bihar during 1937-1938 was organized by whom?

- (a) Jayaprakash Narayan
- (b) Swami Sahajanand Saraswati
- (c) Peer Ali Khan
- (d) Swami Dayanand Saraswati

67 Consider the following events during India's Freedom Struggle:

- (1) Home Rule Movement
- (2) Surat Split
- (3) Kheda Satyagraha
- (4) Minto-Morley Reforms

Which of the following is the correct chronological order of the events given above?

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

68 Lord Lytton is not associated with which of the following?

- (a) The Arms Act
- (b) The Vernacular Press Act
- (c) The Ilbert Bill
- (d) The Strachey Commission

69 Which treaty was signed after the Battle of Buxar?

- (a) The Treaty of Sugauli
- (b) The Treaty of Bassein
- (c) The Treaty of Salbai
- (d) The Treaty of Allahabad

70 The Dutch East India Company established its factory at Patna in which year?

- (a) 1632 (b) 1643 (c) 1648 (d) 1635

71 In which of the following movements did Mahatma Gandhi make the first use of the hunger strike as a weapon?

- (a) Bardoli Satyagraha
- (b) Ahmedabad Strike
- (c) Rowlatt Satyagraha
- (d) Non-Cooperation Movement

72 The Quit India Movement in 1942 witnessed significant contributions from leaders of Bihar. Which prominent Bihar leader was known as the 'Bihar Kesari' and actively participated in the Quit India Movement?

- (a) Shri Krishna Singh
- (b) Anugrah Narayan Sinha
- (c) Ram Manohar Lohia
- (d) Dr. Rajendra Prasad

73 In response to the mass agitation of the Champaran Movement, the British Government took which step to address the issue?

- (a) Enforced strict curfew and imposed Martial Law in the region
- (b) Instituted the Champaran Agrarian Committee
- (c) Declared Champaran as an independent State
- (d) Appointed Mahatma Gandhi as the Governor of Champaran

74 Match List-I with List-II:

List-I		List-II	
(A)	Servants of India Society	(1)	Debendranath Tagore
(B)	Tattwabodhini Sabha	(2)	Gopal Krishna Gokhale
(C)	Atmiya Sabha	(3)	Ram Mohan Roy
		(4)	Keshab Chandra Sen

Select the correct answer using the codes given below.

- | | | | |
|-----|----------|----------|----------|
| | A | B | C |
| (a) | 2 | 4 | 3 |
| (b) | 1 | 2 | 3 |
| (c) | 1 | 4 | 3 |
| (d) | 2 | 1 | 3 |

75 Ambabai, a woman freedom fighter, belonged to which of the following States of India?

- (a) Andhra Pradesh
- (b) Karnataka
- (c) Madhya Pradesh
- (d) Kerala

76 Who among the following was not the member of the Cabinet Mission?

- (a) J. Andrew
- (b) A. V. Alexander
- (c) P. Lawrence
- (d) None of them

77 "The Indian National Congress was founded on the basis of safety valve theory, to protect the British Government from threats". Which leader said that?

- (a) Bipin Chandra Pal
- (b) Lala Lajpat Rai
- (c) C. Rajagopalachari
- (d) None of them

78 In which of the following Indian National Congress Sessions, the resolutions related to the Fundamental Rights were passed for the first time?

- (a) Karachi Session-1931
- (b) Gaya Session-1922
- (c) Surat Session-1907
- (d) None of the above

79 Which of the following were the reasons for the failure of the Revolt of 1857?

- (1) The military superiority of the British

(2) The rebels did not have a unified programme and ideology

(3) There was a lack of support from all the sections of society

Select the correct answer using the codes given below.

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

80 The cook from Bihar who saved Mahatma Gandhi's life from a murder attempt by food poisoning in 1917 was:

- (a) Mir Bakawal
- (b) Batak Mian
- (c) Muzaffar Ahmad
- (d) None of them

81 A man 'Ramesh', who owns a plot of land of 100 square yards, increases his plot of land by acquiring -10% more from his neighbour 'Suresh', who also owns 100 square yards land. After 2 years, he sells back 10% of the total plot to the neighbour. Which of the following is correct?

- (a) Suresh's land is more than Ramesh
- (b) Ramesh's land is more than Suresh
- (c) Both are equal
- (d) None of the above

82 Find the odd pair among the following options.

- (a) Brewery : Alcohol
- (b) Stationery : Paper
- (c) Snobbery : Shoes
- (d) Millinery : Hats

83 What should come in place of question mark (?) in the following number series?

132 156 ? 210 240 272

- (a) 182
- (b) 199
- (c) 204
- (d) 196

84 Select the missing number from the given alternatives:

44	49	37
52	?	41
58	35	53

- (a) 77
- (b) 66
- (c) 63
- (d) 56

85 Read the given statement and conclusions carefully. Decide which of the given conclusions logically follow(s) from the statement:

Statement: In a one-day cricket match, the total runs made by a team were 200, of which 160 runs were made by spinners.

Conclusions:

- (1) 80% of the team consisted of spinners.
- (2) The opening batsmen were spinners.

Select the correct answer.

- (a) Only 2 follows the statement
- (b) Both 1 and 2 follow the statement
- (c) Neither 1 nor 2 follows the statement
- (d) Only 1 follows the statement

86 In a code language, if GREAT is written as 718222620 and MONK is written as 13121411, then how will VIGOROUS be written in the same language?

- (a) 21177121811619
- (b) 22187131813620
- (c) 21187111711620
- (d) 22187121812619

87 Find the odd one in the following groups:

Q,W,Z,B B,H,K,M W,C,G,J M,S,V,X

- (a) M,S,V,X (b) W,C,G,J (c) B,H,K,M (d) Q,W,Z,B

88 Four branches of a company are located at M, N, O and P. M is in the North of N at a distance of 4 km; P is in the South of O at a distance of 2 km; N is in the Southeast of O by 1 km.

What is the distance between M and P in km?

- (a) 28.5 (b) 6.74
(c) 5.34 (d) None of the above

89 In a certain code language, 'GAME' is written as '\$÷*%' and 'BEAD' is written as '#%÷x'. How will the word 'MADE' be written in that code language?

- (a) * ÷ \$ % (b) * ÷ x % (c) # ÷ x % (d) \$ ÷ x %

90 Q travels towards East. M travels towards North. S and T travel in opposite directions. T travels towards right of Q. Which of the following is definitely true?

- (a) S travels towards West
(b) T travels towards North
(c) M and S travel in the same direction
(d) M and S travel in the opposite directions

91 Which of the following are computer languages?

- (1) Cobra (2) Python (3) Squirrel (4) Java

Select the correct answer using the codes given below.

- (a) Only 1, 2 and 3 (b) Only 3 and 4
(c) Only 1 and 2 (d) All of the above

92 What is the full form of GPT in ChatGPT, recently seen in the news?

- (a) GUID Partition Table
(b) Grooved Pegboard Test
(c) Generative Pre-Trained Transformer
(d) Glutamic Pyruvic Transaminase

93 Which of the following are not the tastes of the tongue?

1. Sweet 2. Bitter 3. Salty 4. Spicy
5. Umami 6. Sour 7. Pungent

Select the correct answer using the codes given below.

- (a) 1, 3 and 4 (b) 4 and 7
(c) 3 and 6 (d) 2, 5 and 7

94 Which of the following pairs are correctly matched?

- (1) Anorexia : Sleep disorder
(2) Insomnia : Eating disorder
(3) Dyspnoea : Shortness of breath
(4) Anosmia : Partial or full loss of smell

Select the correct answer using the codes given below.

- (a) Only 3 and 4 (b) Only 2 and 3
(c) Only 1 and 2 (d) All of the above

95 In the universe, what are pulsars?

- (a) Rotating neutron stars (b) Explosion of a star
(c) Radio waves emitted by a star
(d) A group of stars

96 In the context of lab-grown diamonds (LGDs), what is used as a diamond seed?

- (a) Moissanite (b) Graphite
(c) Cubic Zirconia (CZ) (d) White sapphire

97 What is the 'fibre' used to make bulletproof jackets?

- (a) Terylene (b) Tweed (c) Kevlar (d) Nylon

98 What is/are the full form(s) of HMX?

- (1) High Melting Explosive
(2) High-Density Monoatomic Xenon
(3) Hedge Monetizing Xenocurrency
(4) Her Majesty's Explosive

Select the correct answer using the codes given below.

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

99 What is the name of Tesla's humanoid robot launched in October 2022?

- (a) Atlas (b) Pepper (c) Optimus (d) Sophia

100 What is the 'Manhattan Project'?

- (a) One of the largest art auctions of the world
(b) A real estate project in New York City
(c) A famous theme park
(d) A research and development undertaking that produced the first nuclear weapons

101 The image formed by concave mirror is real, inverted and of the same size as that of the object. The position of the object should be:

- (a) At the centre of curvature
(b) Between the focus and centre of curvature
(c) Beyond the centre of curvature
(d) At the focus

102 A photoelectric cell is a device which:

- (a) Stores light energy
(b) Converts electric energy into light energy
(c) Converts light energy into electric energy
(d) None of the above

103 The amount of solute present per unit volume or per unit mass of the solution/solvent is known _____ as in Chemistry.

- (a) Concentration of solvent
(b) Concentration of solute
(c) Concentration of solution
(d) Composition of solute

104 How do COVID vaccines stimulate an immune response?

- (a) By introducing a real SARS-CoV-2 virus
(b) By introducing a harmless piece of SARS-CoV-2 virus
(c) By introducing antibodies, against SARS-CoV-2 virus
(d) By introducing live attenuated SARS-CoV-2 virus

105 Which of the following liquids is a bad conductor of electricity?

- (a) Lemon juice (b) Orange juice
(c) Salted water (d) None of the above

106 The DNA double helix structure was discovered by:

- (a) Rosalind Franklin and Maurice Wilkins
(b) Linus Pauling
(c) Gregor Mendel
(d) James Watson and Francis Crick

107 Two objects of different masses falling freely near the surface of the Moon would:

- (a) Undergo a change in their inertia
(b) Have same velocity at any instant
(c) Experience forces of same magnitude
(d) Have different accelerations

108 How do vector vaccines work to provide immunity?

- (a) By directly attacking and destroying pathogens in the body

- (b) By placing the virus in a modified version of a different virus
- (c) By entering directly into the cells and enabling them to create spike proteins
- (d) By introducing a weakened or inactivated virus into the body

109 The process that continually adds new crust is:

- (a) Earthquake
- (b) Seafloor spreading
- (c) Convection
- (d) Subduction

110 The theory that states "pieces of the Earth's crust are in constant, slow motion driven by movement in the mantle" is called:

- (a) The theory of Pangaea
- (b) The theory of plate tectonics
- (c) The theory of plate boundaries
- (d) The theory of continental drift

111 What is the expanded form of the term 'mRNA' that has been widely discussed since the beginning of the pandemic?

- (a) Mutant Ribonucleic Acid
- (b) Modified Ribonucleic Acid
- (c) Mnemonic Ribonucleic Acid
- (d) Messenger Ribonucleic Acid

112 An AC current can be produced by:

- (a) Transformer
- (b) Dynamo
- (c) Choke coil
- (d) None of the above

113 Current density is:

- (a) Dimensionless
- (b) A vector quantity
- (c) A scalar quantity
- (d) None of the above

114 What is the basis of most useful classification of medications in medical chemistry?

- (a) Chemical structure
- (b) Molecular targets
- (c) Pharmacological effect
- (d) None of the above

115 Which of the following slows down the reaction rate?

- (a) Heterogeneous catalyst
- (b) Homogeneous catalyst
- (c) Catalytic promoter
- (d) None of the above

116 Input and output nerves meet at:

- (a) Heart
- (b) Central nervous system
- (c) Liver
- (d) None of the above

117 Which of the following technologies will be enabled by the 5G mobile communication networks?

- (1) Internet of Things
- (2) Edge Computing
- (3) Network Slicing

Select the correct answer using the codes given below.

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

118 Match List-I with List-II:

List-I (Space Mission)		List-II (Exploration)	
(A)	Cassini-Huygens	1.	Jupiter
(B)	Juno	2.	Saturn and its rings
(C)	Artemis	3.	Venus
(D)	VERITAS	4.	Human Space-flight Moon to Mars

Select the correct answer using the codes given below.

	A	B	C	D
(a)	3	1	4	2
(b)	2	3	4	1
(c)	3	1	2	4
(d)	2	1	4	3

119 Match List-I with List-II :

List-I (Cloth)		List-II (Origin)	
(A)	Linen	1.	Coconut plant
(B)	Coir	2.	Flax plant
(C)	Mohair	3.	Feathers of duck and geese
(D)	Down	4.	Angora goat

Select the correct answer using the codes given below.

	A	B	C	D
(a)	4	3	1	2
(b)	2	1	4	3
(c)	4	1	3	2
(d)	1	3	2	4

120 Consider the following statements:

(1) Taeniasis is an intestinal infection caused by three species of tapeworm - Taenia solium, Taenia saginata and Taenia asiatica.

(2) When cysts develop in the brain, the condition is referred to as neurocysticercosis (NCC).

Which of the above statements is/are correct?

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

121 What is the name of the deep-sea submersible that imploded during an underwater voyage to the Titanic wreckage?

- (a) Falcon
- (b) Trident
- (c) Titan
- (d) Alvin

122 Match List-I with List-II:

List-I (Footwear/Fashion Accessory)		List-II (Description)	
(A)	Beret	1.	A type of men's footwear
(B)	Stilettos	2.	A type of sunglasses
(C)	Aviators	3.	A type of hat
(D)	Chignon	4.	A type of women's footwear
(E)	Brogue	5.	A type of hairstyle

Select the correct answer using the codes given below.

	A	B	C	D	E
(a)	3	4	2	5	1
(b)	5	3	2	4	1
(c)	1	2	3	4	5
(d)	3	2	1	4	5

123 Where did the former President of the USA give his interview recently?

- (a) Sarajevo
- (b) Athens
- (c) Amsterdam
- (d) Rome

- 124** In the context of sports, which of the following pairs are correctly matched?
 (1) Flushing Meadows: French Open
 (2) Venus Rosewater Dish: Wimbledon Trophy (Women)
 (3) Roland Garros: US Open
 (4) Australian Open (Women): Daphne Akhurst Memorial Cup
 Select the correct answer using the codes given below.
 (a) 2 and 3 (b) 3 and 4
 (c) 2 and 4 (d) 1 and 2
- 125** The Ministry of Home Affairs has completed the Mother Tongue Survey of India (MTSI) in November 2022 with field videography of the country's how many languages?
 (a) 233 (b) 576 (c) 984 (d) 40
- 126** Which State Government launched the State-Level Committee for Vulture Conservation (SLCVC), proposed by the national action for the protection of vultures in India?
 (a) Sikkim (b) Assam
 (c) Meghalaya (d) Tamil Nadu
- 127** Ten captive-bred Asian Giant Tortoises (*Manouria emys*), one of the largest tortoise species in mainland Asia, were recently released into which National Park of India?
 (a) Periyar National Park (b) Pench National Park
 (c) Khangchendzonga National Park
 (d) Ntangki National Park
- 128** Which country has recently reaffirmed Arunachal Pradesh as an integral part of India?
 (a) Australia (b) Germany
 (c) Russia (d) USA
- 129** India's Rudranksh Balasaheb Patil won which medal in Men's 10 m Air Rifle at the ISSF World Championship in Cairo?
 (a) Bronze (b) Silver
 (c) Gold (d) None of the above
- 130** The National Education Policy, 2020 emphasizes the integration of vocational education into mainstream education from which grade onwards?
 (a) Grade 8 (b) Grade 10
 (c) Grade 12 (d) Grade 6
- 131** India signed the Economic Cooperation and Trade Agreement (ECTA) with which country?
 (a) Australia (b) USA (c) UK (d) UAE
- 132** The Plain Language Act was passed by which of the following countries recently which requires Government officials to use simple and easily understandable English language in official documents and websites?
 (a) Ireland (b) New Zealand
 (c) Germany (d) Australia
- 133** Tillyardembi Fossils of the world's first plant pollinators, called Tillyardembiids, were discovered recently in which country?
 (a) India (b) Russia (c) China (d) Greece
- 134** The 'Lisbon Declaration', which made headlines, is associated with the conservation of which entity?
 (a) Mountains (b) Oceans
 (c) Freshwater glaciers (d) Air
- 135** Which of the following animals was not known to the people of the Indus Valley Civilization?
 (a) Elephant (b) Horse
 (c) Bull (d) None of the above
- 136** Which of the following is not a UNESCO World Heritage Site?
 (a) India Gate (b) Red Fort
 (c) Qutb Minar (d) None of the above
- 137** The concept of the Directive Principles of State Policy in the Indian Constitution was borrowed from the Constitution of:
 (a) Ireland (b) Switzerland
 (c) England (d) None of the above
- 138** Sikkim became a full-fledged State of the Union of India in:
 (a) 1976 (b) 1975
 (c) 1974 (d) None of the above
- 139** Which among the following currencies is the costliest?
 (a) US Dollar (b) Pound Sterling
 (c) Euro (d) None of the above
- 140** Bihar Government has planned to make Bihar State 'pollution free' by reducing carbon emissions by which year?
 (a) 2024 (b) 2030 (c) 2047 (d) 2022
- 141** In the context of 'Shipwreck Tourism', shipwrecks in Indian waters have been explored at Sunchi Reef, Ameer Shoals and Grande Island. Where are these locations?
 (a) Off the coast of Lakshadweep
 (b) Off the coast of Tamil Nadu
 (c) Off the coast of Odisha
 (d) Off the coast of Goa
- 142** The G20 members represent:
 (1) Around 85% of the global GDP
 (2) About 50% of the global trade
 (3) About two-thirds of the world population
 Which of the above statistics is/are correct?
 (a) Only 1 and 3 (b) 1, 2 and 3
 (c) Only 1 and 2 (d) Only 1
- 143** Who is the Head of Russia's Wagner Mercenary Group?
 (a) Yevgeny Prigozhin (b) Aleksandr Lukashenko
 (c) Volodymyr Zelenskyy (d) Sergei Shoigu
- 144** The Global Gender Gap Report is released by:
 (a) The UN Women
 (b) The World Economic Forum
 (c) The UNDP
 (d) The World Bank
- 145** Which one of the following statements regarding Queen Elizabeth II of the United Kingdom is correct?
 (a) She reigned for 68 years and died at the age of 94 years.
 (b) She reigned for 72 years and died at the age of 92 years.
 (c) She reigned for 66 years and died at the age of 90 years.

(d) She reigned for 70 years and died at the age of 96 years.

146 What was the theme of DefExpo - 2022, held in Gujarat?

- (a) Path to Pride
- (b) Synergy for Defence
- (c) Aatmanirbharta
- (d) India: The Emerging Defence Manufacturing Hub

147 The three-day celebration of Thadingyut Festival is celebrated in which country?

- (a) Nepal (b) Germany (c) Myanmar (d) Chile

148 Consider the following statements regarding the 'White House':

- (1) The address of the White House is 1800 Pennsylvania Avenue.
- (2) It is the official residence and workplace of the President of USA.
- (3) On November 1, 1800, John Adams became the first President to take residence in the building.
- (4) It is a symbol of American Democracy.

Which of the above statements are correct?

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

149 'Net Metering' is sometimes seen in the news in the context of promoting:

- (a) The installation of water meters in urban households
- (b) A billing mechanism for solar energy by consumers for the electricity they add to the grid
- (c) The use of piped natural gas in the kitchens of households
- (d) The installation of CNG kits in motorcars

150 Match List-I with List-II:

List-I (Colour)		List-II (Combination)	
(A)	Magenta	1.	Green and blue
(B)	Teal	2.	Red and blue
(C)	Mauve	3.	Blue, green and white
(D)	Cyan	4.	Blue, red and white

Select the correct answer using the codes given below.

	A	B	C	D
(a)	2	4	3	1
(b)	4	2	1	3
(c)	3	4	2	1
(d)	2	3	4	1

ANSWERS WITH EXPLANATION

1 Option (a) is correct.

Explanation: Gunpowder is believed to have been introduced to India during 7th-8th Century, likely by Islamic traders and travellers. Much before the arrival of Babur.

- Arch and dome had been introduced by the Delhi sultanates. Babar establishment of Timurid dynasty in India in 1526 AD.
- Although cannons were not introduced by Babur, he is believed to be the first one to use it in warfare.

2 Option (a) is correct.

Explanation: The port that was often referred to as "Babul Makka" during the Mughal period was Surat. Pilgrims from various regions, including the Mughal Empire, would often embark on their journey to Mecca from Surat. As a result, Surat was associated with the concept of being a "gateway to Mecca", which is what "Babul Makka" signifies.

3 Option (b) is correct.

Explanation: The Ashtapradhan (also spelled Astapradhan) was a council of eight ministers who played a crucial role in the administration of the Maratha Empire, particularly during the reign of Chhatrapati Shivaji Maharaj. Each minister was responsible for a specific department of the government. The Ashtapradhan system was a well-organized and efficient administrative structure.

4 Option (b) is correct.

Explanation: The Ajanta Caves, a UNESCO World Heritage Site, are renowned for their ancient Buddhist rock-cut cave paintings and sculptures. Among the beautiful artwork found in these caves is a notable depiction of Bodhisattva Padmapani.

5 Option (d) is correct.

Explanation: The option have been interchanged.

- Fa-hien, a Chinese pilgrim and Buddhist monk, embarked on a religious mission to India during the reign of Chandragupta II, a prominent Gupta dynasty ruler.
- Hiuen Tsang visited India between AD 627 and 643, during the reign of Harsha (Harshavardhana).

6 Option (d) is correct.

Explanation: The correct match is as follows:

List-I		List-II	
(a)	Charaka	(2)	Medicine
(b)	Brahmagupta	(1)	Mathematics
(c)	Varahamihira	(4)	Astrology
(d)	Vishakhadatta	(3)	Playwright

- Charaka: Charaka was an ancient Indian physician and is often regarded as one of the principal contributors to the ancient Indian science of medicine, Ayurveda.
- Brahmagupta: He made significant contributions to mathematics, including solutions to quadratic equations.
- Varahamihira: Varahamihira was an ancient Indian astronomer, mathematician, and astrologer.
- Vishakhadatta: Vishakhadatta was an ancient Indian playwright and is best known for his play "Mudrarakashasa".

7 Option (b) is correct.

Explanation: Balban introduced the renowned Persian festival of Nowruz in an attempt to impress his subjects with his wealth and authority. Nowruz is a New Year celebration that marks the Spring Equinox.

8 Option (d) is correct.

Explanation: The Nathpanthis, Siddhas, and Yogis were a group of devoted followers who embraced the Bhakti tradition in northern India during a specific historical period. Similar to other religious movements of that era, this group rejected conventional religious rituals, traditional practices, and societal hierarchies.

9 Option (b) is correct.

Explanation: The Wood's Dispatch, also known as the "Despatch on Education," was a significant educational policy in British India introduced by Sir Charles Wood, the President of the Board of Control for India, in 1854. In the Wood's Dispatch the medium of instruction for higher education was primarily English. Wood's Dispatch advocated for the promotion of female education, acknowledging the importance of educating women for societal development.

10 Option (b) is correct.

Explanation: The Maithili language began to develop and flourish under the patronage of the Mithila Kingdom and the Mithila dynasty, also known as the Karnatas of Mithila.

- Maithili is considered one of the Indo-Aryan languages and has a long history of literary and cultural contributions.

11 Option (d) is correct.

Explanation: The main part of the kingdom was in the area of Bihar south of the Ganges River. At first, its capital was Rajagriha, which is the modern Rajgir, and later it moved to Pataliputra, the modern Patna. Rajagriha was initially called 'Girivrija', but it got its new name during Ajatashatru's rule.

12 Option (c) is correct.

Explanation: Lord Lytton introduced this act as part of their efforts to control and regulate the Indian vernacular press, which they perceived as a source of criticism and political unrest.

- The Vernacular Press Act of 1878 is also known by another name: the "Gagging Act".

- The Vernacular Press Act of 1878 was repealed by the Viceroy of India, Lord Ripon in 1882.

13 Option (c) is correct.

Explanation:

- Lord Mayo's Resolution of 1870, emphasizing decentralization, regional focus, efficiency, and accountability in the administration of British India.

- Lord Mayo's Resolution of 1870 was a significant step that divided Central and Provincial finances.

- The resolution empowered Provincial Governments to administer specific services.

- The resolution aimed to rectify existing disparities in financial matters.

- The resolution aimed to address the actual needs of the provinces in terms of finances and administration.

14 Option (b) is correct.

Explanation: "Nitisara" is a famous Sanskrit text on statecraft and political ethics in ancient India. It was

written by the renowned Indian scholar Kamandaka. It provides valuable insights into principles of governance, statecraft, ethics, and political philosophy.

15 Option (c) is correct.

Explanation: Ishwardas Nagar's "Futuh-i-Alamgiri" is a significant historical account that provides valuable insights into the lengthy reign of Emperor Aurangzeb, which spanned half a century from 1658 to 1707 AD.

16 Option (b) is correct.

Explanation: Meghavarman, the Buddhist king of Ceylon, dispatched a missionary to Samudragupta seeking permission to construct a Buddhist temple in Gaya. Samudragupta, in response, granted the requested permission, allowing Meghavarman to establish a monastery at Bodh Gaya.

17 Option (c) is correct.

Explanation: Bihar and Orissa was separated from Bengal on 22 March 1912, with Patna as capital.

18 Option (b) is correct.

Explanation: Stupa, Chaitya, and Vihara are important elements in Buddhist architecture and religious practice. Three types of structures are: monasteries (viharas), places to venerate relics (stupas), and shrines or prayer halls (chaityas, also called chaitya grihas), which later came to be called temples in some places.

19 Option (b) is correct.

Explanation: The Sujani embroidery of Bihar is a textile art form that has been granted protection under the GI registration act. This traditional craft typically involves the creation of quilts or bedspreads, originally made from old clothes but now more commonly fashioned from readily available fabrics. The embroidery is characterized by its use of simple stitches and features motifs that convey stories.

20 Option (a) is correct.

Explanation: Statements 1 and 2 are incorrect.

- Statement 1: Vikramshila University was not located in the present-day Banka district of Bihar. It was situated near the modern town of Bhagalpur in Bihar, India.

- Statement 2: Vikramshila University was established by King Dharmapala of the Pala dynasty, not King Gopala I.

21 Option (d) is correct.

Explanation: Dhudwa national park is located in Uttar Pradesh. Whereas Gajner wildlife sanctuary is in Rajasthan. Valmiki National Park and Bhimbandh Wildlife Sanctuary are located in Bihar.

22 Option (d) is correct.

Explanation: The Gangetic River dolphin has been listed as endangered under the IUCN Red List since 1996.

- The Gangetic dolphin lost its eyes in the course of evolution to adapt to the muddy water of rivers. They largely navigate by echo-location or sonar.

- The Ganges River Dolphin or also called 'Susu', is the National Aquatic Animal of India.

23 Option (b) is correct.

Explanation: The Gandak River, originates in central Nepal where it is formed by the confluence of the Kali and Trisuli rivers, both of which have their sources in the Great Himalaya Range. From this point of confluence in Nepal to its crossing into India, it is referred to as the Narayani River.

24 Option (c) is correct.

Explanation: According to a survey conducted by the Geological Survey of India (GSI), there are approximately 222.88 million tonnes of gold reserves in the Jamui district, which includes 37.6 tonnes of mineral-rich ore.

25 Option (b) is correct.

Explanation: The Triveni Canal has been built along the Gandak River and primarily serves the purpose of irrigation in the north-western region of Bihar. The Gandak River is a left bank tributary of the Ganges.

26 Option (d) is correct.

Explanation: Extensive placer deposits of gold are found along the coast of Ghana. Interestingly, there are no source rocks for gold in this region. The gold-bearing veins are actually located in Brazil. It's evident that the gold deposits in Ghana originated from the Brazilian plateau during a time when the two continents were adjacent to each other.

27 Option (d) is correct.

Explanation: The correct matching is as follows:

Rock System		Descriptions	
(A)	Dharwar rock system	3.	Part of the oldest Archaean rock system
(B)	Vindhyan rock system	4.	Sandstone, limestone, dolomite, quartzite and shale are the main constituents of this rock system
(C)	Quaternary rock system	1.	Created by the rapid deposition of alluvium by Himalayan and Peninsular rivers
(D)	Tertiary rock system	2.	Can be found in the West Champaran district

28 Option (d) is correct.

Explanation: The Gulf of Mannar Biosphere Reserve, situated on the southeastern coast of India opposite Sri Lanka, encompasses an expansive area of 1,050,000 hectares. This region stands out as one of the world's most ecologically diverse areas, particularly in terms of marine biodiversity. Within the biosphere reserve, you can find a complex ecosystem comprising 21 islands, along with estuaries, beaches, near shore forests, and a marine component featuring algal communities, sea grasses, coral reefs, salt marshes, and mangroves.

29 Option (d) is correct.

Explanation: To calculate the time in Thimphu, Bhutan, at 12:00 noon Greenwich Mean Time (GMT) when

considering a specific longitude, such as 90 degrees east, you can use the following steps:

1. Determine the time difference for each degree of longitude: Earth rotates 360 degrees in approximately 24 hours, so each degree of longitude corresponds to a time difference of 24 hours divided by 360 degrees, which is 4 minutes.

2. Calculate the time difference between the prime meridian (0 degrees longitude, which is Greenwich) and the longitude of interest (in this case, 90 degrees east).

3. Multiply the time difference per degree (4 minutes) by the number of degrees east of Greenwich (90 degrees). Here's the calculation:

$$\text{Time difference} = 4 \text{ minutes/degree} \times 90 \text{ degrees} = 360 \text{ minutes}$$

Now, convert the minutes to hours:

$$360 \text{ minutes} \div 60 \text{ minutes/hour} = 6 \text{ hours}$$

So, when it is 12:00 noon at Greenwich Mean Time (GMT), it would be 6:00 PM (18:00) at a location along the 90-degree east longitude, which includes parts of Bhutan, including Thimphu.

30 Option (a) is correct.

Explanation: Mica is primarily found in the northern region of the Chota Nagpur Plateau. The central production area for mica is concentrated within the Koderma-Gaya-Hazaribagh belt, which is located in the state of Jharkhand, India. This region is known for its significant mica deposits and plays a crucial role in mica production in the country.

31 Option (a) is correct.

Explanation: The equator holds a value of 0 degrees, while the latitudes at the North Pole and South Pole are designated as 90 degrees North (90°N) and 90 degrees South (90°S) respectively.

■ If parallels of latitude are drawn at one-degree intervals, there will be a total of 89 parallels in both the northern and southern hemispheres, resulting in a grand total of 179 parallels (including the equator).

32 Option (a) is correct.

Explanation: The Kosi Plain, also known as the Kosi Basin, is located in the northern part of the Indian subcontinent, primarily in the state of Bihar, India, and extends into Nepal.

■ The elevation of the Kosi Plain can range from approximately 30 meters to 45 meters above sea level. It is not a uniform plain, and its elevation can vary depending on the specific location within the region.

33 Option (b) is correct.

Explanation: Baghelkhand plateau lies at the border of MP and Chattisgarh. This is where the tropic of cancer and Indian Standard time line intersect.

34 Option (a) is correct.

Explanation: Almora District of Uttarakhand doesn't have a border with Tibet.

35 Option (c) is correct.

Explanation: The El Niño current, also known as the El Niño-Southern Oscillation (ENSO), involves changes in sea surface temperatures and atmospheric conditions

primarily in the tropical Pacific Ocean. Specifically, it is associated with the central and eastern equatorial Pacific Ocean. During an El Niño event, warm surface waters from the western Pacific flow eastward toward the central and eastern Pacific, disrupting normal ocean and atmospheric patterns and leading to various climate impacts worldwide.

36 Option (c) is correct.

Explanation: Lake Victoria is the second-largest freshwater lake in the world by area.

- The African great lakes consist of seven lakes that span countries in East, South and Central Africa. These lakes are lake Victoria, Tanganyika, Malawi, Turkana, Albert, Kivu and Edward in order of size.
- Kenya, Tanzania and Uganda share Lake Victoria.
- The White Nile River is the only outlet from the lake.

37 Option (c) is correct.

Explanation: In the plains and other similar low-altitude areas, a heat wave is typically considered when the temperature exceeds 40°C for a sustained period. This indicates extremely hot weather and poses health risks to the population. In hilly or higher-altitude regions, due to the generally milder climate, a heat wave is considered when the temperature exceeds 30°C (86°F) for a sustained period.

38 Option (d) is correct.

Explanation: Columbus was born in the Italian seaport of Genoa in 1451.

- Jacques Cartier was a French-Breton maritime explorer for France. Jacques Cartier was the first European to describe and map the Gulf of Saint Lawrence and the shores of the Saint Lawrence River
- Sir Francis Drake was an English explorer and privateer best known for his circumnavigation of the world in a single expedition between 1577 and 1580.
- Ferdinand Magellan was a Portuguese explorer best known for having planned and led the 1519 Spanish expedition to the East Indies across the Pacific Ocean to open a maritime trade route

39 Option (d) is correct.

Explanation: The United Arab Emirates (UAE) is a federation of seven emirates, each governed by its own ruler or emir. This includes Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Quwain, Ras Al Khaimah and Fujairah.

40 Option (c) is correct.

Explanation: The Subarnarekha River is among the longest rivers that flow eastward through multiple states. It begins its journey near Nagri village within the Ranchi district of Jharkhand, originating at an elevation of 600 meters above sea level. This river spans a total length of approximately 395 kilometers. Some of its major tributaries include the Kanchi, Kharkai, and Karkari rivers.

41 Option (d) is correct.

Explanation: The criteria presently followed for specification of a community as a Scheduled Tribe are : (i) indications of primitive traits, (ii) distinctive culture, (iii) geographical isolation, (iv) shyness of contact with

the community at large, and (v) backwardness. However, these criteria are not spelled out in the Constitution.

42 Option (a) is correct.

Explanation: India's Fundamental Rights framework has been influenced by the U.S. Constitution. These Fundamental Rights are essential rights granted to individuals to ensure their dignity and integrity, as outlined in Part III of the Indian Constitution.

43 Option (b) is correct.

Explanation: Article 17 of the Indian Constitution is a significant provision that provides for the abolition of "untouchability".

44 Option (d) is correct.

Explanation: As per Article 216 of the Constitution the High Courts shall consist of a Chief Justice and such other Judges as the President may from time to time deem it necessary to appoint.

45 Option (b) is correct.

Explanation: The Fifth Schedule of the Indian Constitution deals with the administration and governance of Scheduled Areas and Scheduled Tribes (STs). It provides special provisions and safeguards for the protection of the rights and interests of indigenous tribal communities residing in certain specified areas of India.

46 Option (b) is correct.

Explanation: The concept of the "basic structure" of the Indian Constitution, which implies certain fundamental principles and features of the Constitution that cannot be altered or amended by the Parliament through ordinary legislative processes, was first articulated by the Indian Supreme Court in the landmark case of Kesavananda Bharati v. State of Kerala in 1973. This case is significant because it established the principle that while the Indian Parliament has the power to amend the Constitution, it cannot alter its basic structure or its fundamental features, which include democracy, secularism, federalism, and the separation of powers, among others.

47 Option (d) is correct.

Explanation: Communist Party of India (Marxist) - 1964. It was founded by P. Sundarayya and E. M. S. Namboodiripad.

- Communist Party of India - 1925. It was founded by S. A. Dange, Shripad Amrit Dange, M. N. Roy, and others.
- Bahujan Samaj Party - 1984. It was founded by Kanshi Ram.
- All India Trinamool Congress (AITC) - 1998. It was founded by Mamata Banerjee.

48 Option (c) is correct.

Explanation: Article 120 (1) Notwithstanding anything in Part XVII, but subject to the provisions of article 348, business in Parliament shall be transacted in Hindi or in English:

- Provided that the Chairman of the Council of States or Speaker of the House of the People, or person acting as such, as the case may be, may permit any member

who cannot adequately express himself in Hindi or in English to address the House in his mother-tongue.

49 Option (c) is correct.

Explanation: The Supreme Court, in response to the President's reference under Article 143 of the Indian Constitution, broadened the composition of the Collegium to include five members. This new structure consisted of the Chief Justice of India (CJI) along with four of the most senior judges.

- The system for appointing and transferring judges has developed through rulings of the Supreme Court (SC) and has not been established by an Act of Parliament or through a constitutional provision.

- In 1993, a majority decision of a Nine-Judge Constitutional Bench in the Second Judges' Case, and in 1998, a unanimous decision of another Nine-Judge Constitutional Bench in the Third Judges' Case, successfully implemented the concept of the collegium of judges without the need for a constitutional amendment.

50 Option (b) is correct.

Explanation: The 42nd Amendment added the words "socialist", "secular", and "integrity" to the Preamble, emphasising India's commitment to these principles.

- It added 10 fundamental duties to the constitution and not 8.

- The 42nd amendment did not add Article 47.

51 Option (b) is correct.

Explanation: Bankruptcy: It's a legal status, often declared by a court, indicating that an individual or entity is incapable of repaying debts. Bankruptcy involves a structured process, including potential debt repayment through asset sales or government-assisted restructuring.

- Insolvency: It's a financial situation where an entity's debts exceed its assets, making it unable to meet financial obligations. Insolvency doesn't always lead to bankruptcy but may involve various strategies, such as negotiations, debt restructuring, or asset sales, to address the financial challenges. Bankruptcy can be one possible outcome of insolvency when other remedies are not viable.

52 Option (d) is correct.

Explanation: The Industrial Policy Resolution (IPR) was adopted in India on July 24, 1956. This policy marked a significant development in India's economic planning and industrialization efforts, particularly in the post-independence era.

53 Option (c) is correct.

Explanation:

- Statement 2 is incorrect: The PLI scheme has four categories of applicants - global companies, Indian companies, consortium of Indian companies, and consortium of global companies.

- Statement 3 is incorrect: The PLI scheme offers varying incentives depending on the sector, and the average incentive is not a fixed 8%. It ranges from 1% to 20% for different sectors.

54 Option (a) is correct.

Explanation: The scheme is under the Ministry of Panchayati Raj.

CORS stands for Continuous Operating Reference System

55 Option (c) is correct.

Explanation: Consequences of invoking Article 360:

- Salaries and Allowances: The President can give directions to reduce the salaries and allowances of all or any class of persons serving in connection with the affairs of a state. This could impact the remuneration of government employees and officials.

- Reservation of all money bills or other financial bills for the consideration of the President after they are passed by the legislature of the State.

- Direction from the President for the reduction of salaries and allowances of all or any class of persons serving the Union; and the judges of the Supreme Court and the High Courts.

56 Option (c) is correct.

Explanation: Increased government spending without a corresponding increase in productivity or output can lead to higher demand for goods and services, potentially causing inflationary pressures.

- A decline in industrial production and sluggish economic growth can indeed contribute to stagflation.

- A decrease in aggregate demand and consumer spending can lead to a situation where businesses reduce production due to reduced demand, potentially contributing to stagflation.

- If the domestic currency appreciates, the country's goods and services become relatively more expensive for foreign buyers, reducing the competitiveness of exports. This can lead to a decrease in export demand, potentially causing economic slowdown and contributing to stagflation.

57 Option (c) is correct.

Explanation: According to the Economic Survey 2023:

- It is true to claim that FDI has declined due to less private sector participation. The trend of Foreign Direct Investment (FDI) in India has declined due to decline in private sector participation as well as decline in other sectors.

- The statement that FDI has increased compared to pre-pandemic levels is false. The Economic Survey highlights that FDI into India is actually down compared to pre-pandemic levels.

- The claim that there has been a steady increase in FDI in the telecom sector since full reforms is not clearly mentioned in the Economic Survey. Although there has been an increase in FDI in specific sectors, this statement does not capture the overall trend, according to the survey.

- The statement that FDI has declined due to weak global economic conditions is accurate. The Economic Survey indicates that fragile global economic conditions may affect FDI inflows, and it suggests a decline in FDI due to global economic conditions.

■ Therefore, only Statement 4 accurately reflects the trend of Foreign Direct Investment (FDI) as per the Economic Survey 2023.

58 No option is correct (Bonus)

59 Option (c) is correct.

Explanation: Non-plan Expenditure refers to the spending on activities that are not included in the current five-year plan of a country. This category encompasses expenses such as defence services, interest payments, administrative costs, and more.

60 Option (a) is correct.

Explanation: During the last 25 years Indian exports have increased by 17 times and imports by 19 times. India's share in global merchandise exports has risen from 0.6 percent in early 1990s to 1.7 percent in 2016, and similarly the share of imports has risen from 0.6 percent to 2.4 percent during the same period.

61 Option (c) is correct.

Explanation: The fiscal deficit, a measure of government borrowing to meet expenditure, rose to 9.2% of the Gross Domestic Product (GDP) during the fiscal year 2020-2021 (FY21), indicating the strain on government finances due to the pandemic and the measures taken to mitigate its effects. High fiscal deficits during such times are common as governments increase spending to stimulate the economy and support sectors affected by the crisis. Statement 1 is true while statements 2 and 3 are false.

62 Option (d) is correct.

Explanation: The foreign exchange reserves of the Reserve Bank of India (RBI) include various foreign currencies, gold holdings, special drawing rights (SDRs), and reserve positions in the International Monetary Fund (IMF).

63 Option (d) is correct.

Explanation: Rules of origin are regulations and criteria that determine the country of origin of goods in international trade. They are essential for various purposes, including trade agreements, trade statistics, customs duties, and tariffs.

64 Option (b) is correct.

Explanation: Infant Mortality Rate (IMR) is a crucial demographic and public health indicator that measures the number of infant deaths (deaths of children under one year of age) per 1,000 live births in a specific population during a given period.

■ In 2019, the infant mortality rate was 30. MP had highest IMR of 46 while that of UP was 41.

65 Option (c) is correct.

Explanation: Human capital formation refers to the process of acquiring and increasing the number of skilled and educated people in a workforce or population. It involves various activities and investments aimed at improving the knowledge, skills, health, and overall capabilities of individuals. Human capital formation is a crucial driver of economic growth and development.

66 Option (b) is correct.

Explanation: During 1937-1938, Sahajanand Saraswati organised the Bakasht Movement in Bihar, with "Bakasht" signifying lands that peasants cultivated themselves.

This movement sought to combat the eviction of tenants from Bakasht lands by zamindars and resulted in the enactment of the Bihar Tenancy Act and the Bakasht Land Tax.

67 Option (a) is correct.

Explanation: Morley-Minto Reforms: These reforms, also known as the Indian Councils Act of 1909, were implemented in 1909. They expanded the legislative councils' participation.

■ Home Rule Movement: The Home Rule Movement was initiated by Annie Besant and Bal Gangadhar Tilak in 1916. It aimed to demand self-governance and home rule for India within the British Empire.

■ Kheda Satyagraha: The Kheda Satyagraha took place in 1918. It was a non-violent protest led by Mahatma Gandhi in Gujarat against the oppressive land revenue policies imposed by the British during a famine.

■ Surat Split: The Surat Split occurred in 1907 during the Indian National Congress session held in Surat. It led to the division of the Congress party into two factions, the Extremists and the Moderates, due to ideological differences and disputes over the party's future course of action.

68 Option (c) is correct.

Explanation: Lord Lytton, served as the Viceroy of India from 1876 to 1880. His tenure as Viceroy was marked by several significant events and policies, like Vernacular Press Act of 1878, the Great Famine of 1876-1878 (Strachey Commission/Famine Commission), Arms Act of 1878, etc.

■ The Ilbert Bill controversy, also known as the Ilbert Bill agitation, was a significant political and social dispute that occurred in British India in the late 19th century. The controversy centered around the Ilbert Bill, a legislative proposal introduced in 1883 by Sir Courtenay Peregrine Ilbert, the Legal Member of the Viceroy's Executive Council. The bill aimed to amend the Criminal Procedure Code (CPC) of 1872.

69 Option (d) is correct.

Explanation: The Treaty of Allahabad was signed after the Battle of Buxar, which took place on October 22, 1764. The battle was fought between the British East India Company and the combined forces of the Mughal Empire, the Nawab of Oudh (Awadh), and the Nawab of Bengal. The British emerged victorious in the battle, which had significant consequences for British control and influence in India.

70 Option (a) is correct.

Explanation: Dutch East India Company also established their factory at Patna in 1632.

70 Option (b) is correct.

Explanation: Mahatma Gandhi first used the principles of Satyagraha (non-violent resistance) and went on a hunger strike during an industrial dispute at the Ahmedabad Mill in India in 1918. The dispute involved labor issues, particularly the demands of the workers for better working conditions, fair wages, and the right to strike.

72 Option (a) is correct.

Explanation: Known as the "Bihar Kesari," Sri Krishna Singh served as the inaugural Chief Minister of the Indian state of Bihar from 1946 to 1961. Throughout the British colonial era, he endured multiple periods of imprisonment, totaling approximately eight years. He actively participated in Quit India movement.

73 Option (b) is correct.

Explanation: The Lieutenant Governor in Council made the decision to form a Committee of Inquiry to examine and provide a report on the agrarian situation in Champaran, and Mahatma Gandhi was selected as one of its members.

74 Option (d) is correct.

Explanation: Servants of India Society, society founded by Gopal Krishna Gokhale in 1905.

- Debendranath Tagore established Tattvaranjini Sabha which was shortly thereafter renamed the Tattwabodhini ('Truth-seekers') Sabha.

- Atmiya Sabha was a philosophical discussion circle in India. The association was started by Ram Mohan Roy in 1815 in Kolkata.

75 Option (b) is correct.

Explanation: Ambabai from Karnataka was married at the age of twelve but became a widow at sixteen. She took part in picketing foreign cloth and liquor shops in Udipi, leading to her arrest and imprisonment. Despite being rearrested, she continued her activities. During the intervals between her prison terms, she engaged in public speaking, taught spinning, and organized prabhat pheris (morning processions).

76 Option (a) is correct.

Explanation: J. Andrew was not the member of Cabinet Mission. The Cabinet Mission of 1946 was sent by the British government to India to discuss and recommend a plan for the transfer of power from British rule to Indian leadership. The Cabinet Mission consisted of three members who were known as the Cabinet Mission members: Sir Stafford Cripps, Lord Pethick-Lawrence, and A.V. Alexander.

77 Option (c) is correct.

Explanation: The concept of the "safety valve theory" in relation to the Indian National Congress is often attributed to Lala Lajpat Rai, an Indian nationalist and freedom fighter. The safety valve theory suggests that the British allowed the Indian National Congress (INC) to function and have a political platform in order to provide a peaceful outlet for Indian dissent and political agitation.

78 Option (a) is correct.

Explanation: The resolution on Fundamental Rights in the Indian National Congress was passed during the Karachi Session of 1931. This session was presided by Sardar Vallabh bhai patel. It laid the foundation for the demand for fundamental rights and civil liberties in the future Indian constitution. These demands were later incorporated into the Constitution of India, which was adopted in 1950.

79 Option (c) is correct.

Explanation: The Indian Rebellion of 1857, often referred to as the Sepoy Mutiny or the First War of Independence, was a significant event in India's struggle for independence from British colonial rule. The revolt, however, ultimately failed for several key reasons: The Military superiority of the British, absence of unified programme and ideology, and lack of support from all the sections of society.

80 Option (b) is correct.

Explanation: Batak Mian Ansari played a pivotal role in the Champaran Satyagraha of 1917, where he resisted an attempt to poison Mahatma Gandhi's food. His selfless act and dedication to the cause of India's freedom struggle are a significant part of history.

81 Option (a) is correct.

Explanation: Initially,

Ramesh's Land = 100 Sq Yard. and Suresh's land 100 yard

Ramesh takes 10% of Suresh land,

So, Ramesh's land = 100 + 10

= 110 sq yard

Suresh's land = 100-10

= 90 sq yard

After, 2 Year Ramesh's land = $110 \times \frac{(100-10)}{100} = 99$ sq yard

He Sells (110-99) = 11 sq yard

Suresh's land = 90 + 11 = 101 sq yard

Thus, Suresh land is more than Ramesh.

82 Option (c) is correct.

Explanation: Snobbery has nothing to do with Shoes. So, pair (c) is the odd one among the given pairs.

83 Option (a) is correct.

Explanation: The correct order of the series as follows.

132	156	182	210	240	272
└──┬──┘	└──┬──┘	└──┬──┘	└──┬──┘	└──┬──┘	
+24	+26	+28	+30	+32	

84 Option (a) is correct.

Explanation:

First row $(44 - 37) \times 7 = 49$

Second row $(52 - 41) \times 7 = 77$

Third row $(58 - 53) \times 7 = 35$

85 Option (c) is correct.

Explanation:

- The conclusion 1 does not logically follow from the statement. The statement only provides information about the total runs made by the team and the runs made by spinners but does not give any information about the percentage of spinners in the team.

- The statement does not provide information about the positions of the batsmen (whether they are opening batsmen or not). Therefore, the conclusion 2 also does not logically follow from the statement.

86 Option (d) is correct.

Explanation:

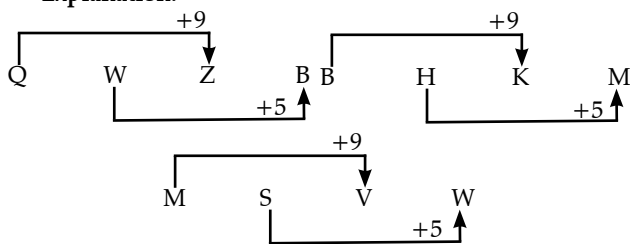
		Vowel		
G	R	E	A	T
7	18	22	26	20

	Vowel		
M	O	N	K
13	12	14	11

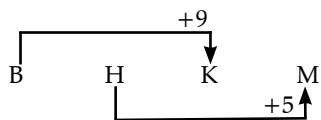
	Vowel		Vowel		Vowel		
V	I	G	O	R	O	U	S
22	18	7	12	18	12	6	19

87 Option (b) is correct.

Explanation:



But,



88 Option (c) is correct.

Explanation: To find the distance between M and P, we can analyze the given information:

- M is north of N at a distance of 4 km.
- P is south of O at a distance of 2 km.
- N is southeast of O by 1 km.
- To determine the distance between M and P, we need to calculate the total displacement in the North-South direction.

Given: M is north of N by 4 km, and P is south of O by 2 km.

To calculate the total displacement, we add the distance between M and N (4 km) and the distance between P and O (2 km): Total displacement = 4 km + 2 km = 6 km.

- Therefore, the distance between M and P is 6 km.
- Among the given options, 5.34 is the closest value to the actual distance of 6 km.
- Hence, the correct answer is 5.34.

89 Option (b) is correct.

By the given information

- G A M E → \$ ÷ * %
- B E A D → # % ÷ ×
- M A D E → * ÷ × %

90 Option (c) is correct.

Explanation: It has been given that Q travels towards East and M travels towards North. Now, T travels towards right of Q implies that T travels towards South. Hence, S travels towards North (because S and T travel in opposite directions). Therefore, it is definitely true that M and S travel in the same direction i.e., North.

91 Option (d) is correct.

Explanation: Computer languages, also known as programming languages, are formal languages used by humans to communicate with computers. These languages are used to write instructions and commands that a computer can understand and execute. They serve as a bridge between human-readable code and machine-executable code. Here are some important computer languages: Python, Java, Cobra, Squirrel, C++, PHP, Perl, Assembly Language etc.

92 Option (c) is correct.

Explanation: GPT Stands for "Generative Pre-trained Transformer". GPT is a type of language model designed for natural language understanding and generation tasks, and when it's used in a chatbot, it's simply referred to as "ChatGPT" to indicate its purpose of engaging in human-like conversations.

93 Option (b) is correct.

Explanation: Spicy and pungent are not primary tastes detected by taste buds on the tongue.

Spicy:

Spicy is a sensation of heat, often caused by compounds like capsaicin, while pungent refers to a strong, sharp taste or smell.

Pungent:

Pungency is a sensation of heat, irritation, or sharpness often found in foods like mustard, radishes, garlic, and onions.

It can add intensity and depth to flavors in various dishes and is often experienced through the nose as well as the mouth.

94 Option (a) is correct.

Explanation:

- Dyspnoea: Dyspnoea is a medical term for shortness of breath or difficulty in breathing.
- Anosmia: Anosmia refers to the partial or complete loss of the sense of smell.
- Anorexia: Anorexia is an eating disorder characterized by an abnormally low body weight, an intense fear of gaining weight, and a distorted perception of weight and body shape. It is not related to sleep disorders.
- Insomnia: Insomnia is a sleep disorder characterized by difficulty falling asleep, staying asleep, or experiencing poor-quality sleep. It is a disorder related to sleep and not an eating disorder.

95 Option (a) is correct.

Explanation: Pulsars are highly magnetized, rotating neutron stars that emit beams of electromagnetic radiation out of their magnetic poles. These beams of radiation are observed as a series of regular pulses of radiation as the star rotates, hence the name "pulsar." Pulsars are a specific type of celestial object in the universe. They are formed from the remnants of massive stars that have undergone a supernova explosion.

96 Option (b) is correct.

Explanation: In the context of lab-grown diamonds, graphite is utilised as a carbon source for the growth of the new diamond. A natural diamond seed also serves as the initial point for this growth.

97 Option (c) is correct.

Explanation: The fiber used to make bulletproof jackets is Kevlar. Kevlar is a strong synthetic fiber known for its high tensile strength, making it an excellent material for ballistic protection. It is widely used in the production of bulletproof vests and other ballistic-resistant equipment due to its ability to absorb and disperse the energy of a bullet upon impact, providing crucial protection to the wearer.

98 Option (b) is correct.

Explanation: The full form of HMX is "High Melting Explosive" or "Cyclotetramethylenetetranitramine." HMX, also known as Octogen, is a powerful and high-energy explosive. It is a stable compound with a high nitrogen content, making it an efficient explosive commonly used in military and industrial applications.

99 Option (c) is correct.

Explanation: Tesla's humanoid robot is called "Optimus," unveiled during the 2022 Tesla AI Day. It aims to replace human tasks and demonstrated capabilities like lifting, carrying, and precise tool usage.

100 Option (d) is correct.

Explanation: The Manhattan Project was the US government program during World War II that developed and built these first atomic bombs. It was initiated to develop the first nuclear weapons, specifically atomic bombs. The project was named after Manhattan, New York, where the early research was conducted. It involved a collaboration of American, British, and Canadian scientists, and it was one of the most significant scientific and technological endeavors in history.

101 Option (a) is correct.

Explanation: When an object is placed at the center of curvature of a concave mirror, the resulting image is real, inverted, and the same size as the object. Furthermore, the image forms precisely at the center of curvature itself.

102 Option (c) is correct.

Explanation: A photocell, also known as a photoelectric cell or photodetector, is a device that converts light energy into electrical energy based on the photoelectric effect. When photons (particles of light) strike the surface of the photocell, they release electrons from the material, creating an electric current. Photocells are commonly used in various applications, including light-sensitive

switches, photography, solar panels, and optical sensors, to detect and respond to changes in light intensity.

103 Option (c) is correct.

Explanation: The amount of solute present per unit volume or per unit mass of the solution is universally said to be concentration of solution. Understanding and specifying the concentration of a solution is crucial in various scientific and industrial applications, such as chemical reactions, pharmaceuticals, food preparation, and environmental analysis. The concentration of a solution directly impacts its properties and how it will interact in different chemical or biological processes.

104 Option (b) is correct.

Explanation: COVID-19 vaccines function by introducing a benign component of the SARS-CoV-2 virus, often a fragment of the virus's spike protein or genetic material, into the body. Importantly, this component is incapable of causing the illness but serves as a stimulus for the immune system. Consequently, the immune system gains the ability to identify and combat the virus, offering protection against potential future infections. This vaccination strategy enables the body to develop immunity without exposing it to the disease-causing virus.

105 Option (d) is correct.

Explanation: Every liquid in the list conducts electricity to some extent. This conductivity is due to the presence of ions, which are electrically charged particles capable of carrying an electric current. Salted water, orange juice, and lemon juice, for example, contain ions, making them effective conductors of electricity.

■ Conversely, distilled water is a weak conductor of electricity because it lacks ions.

106 Option (d) is correct.

Explanation: James Watson and Francis Crick are acknowledged for their pivotal role in uncovering the double helix structure of DNA. Their ground breaking research on DNA's structure was made public in 1953 and stands as one of the most momentous achievements in the realm of molecular biology.

107 Option (b) is correct.

Explanation: Two objects of different masses falling freely near the surface of the moon would have the same velocities at any instant. This is because they will have the same acceleration due to gravity.

108 Option (b) is correct.

Explanation: Vector vaccines operate by using a modified version of a different virus to transport the genetic material of the targeted virus, and this modified virus, referred to as a vector, is harmless to humans. Once the genetic material enters the body's cells, these cells initiate the production of proteins from the targeted virus. This process triggers the immune system to generate antibodies against the virus. Consequently, if the individual is subsequently exposed to the actual virus, the immune system can recognize and eliminate it.

■ Vector vaccines are effective against a wide spectrum of viruses, including COVID-19, Ebola, and Zika.

109 Option (b) is correct.

Explanation: Seafloor spreading is a geological phenomenon characterised by the ongoing creation of fresh oceanic crust at mid-ocean ridges, driven by the movement of tectonic plates as they diverge. This process entails the upward flow of molten rock, known as magma, from the Earth's mantle, which subsequently cools and solidifies, forming brand-new crust. Simultaneously, the emergence of this fresh crust displaces older crust away from the mid-ocean ridges, leading to the gradual enlargement of ocean basins. Seafloor spreading plays a pivotal role in the broader concept of plate tectonics and contributes significantly to the dynamic mobility of the Earth's lithosphere.

110 Option (b) is correct.

Explanation: The concept known as plate tectonics asserts that pieces of the Earth's crust are continually and gradually moving, propelled by the motion occurring in the mantle below.

- The theory of continental drift, while historically significant, is now considered outdated. It originally posited that continents were once connected and have since separated. However, it lacked explanations for the movement of the ocean floor and the driving forces behind plate tectonics.

111 Option (d) is correct.

Explanation: "mRNA" stands for "Messenger Ribonucleic Acid". This molecule holds a pivotal role in cellular protein synthesis and has garnered significant attention in the context of the COVID-19 pandemic, notably concerning mRNA vaccines such as those developed by Pfizer-BioNTech and Moderna.

112 Option (b) is correct.

Explanation: A dynamo is a particular kind of generator that employs electromagnetic induction to transform mechanical energy into electrical energy. It comprises a rotating coil of wire placed within a magnetic field. When the coil rotates, it intersects with the magnetic field, resulting in the generation of an electric current.

113 Option (b) is correct.

Explanation: Current density is a vector quantity with both direction and scalar magnitude. The direction of the current density vector is the motion of the positive charges at a given point in space.

114 Option (b) is correct.

Explanation: In the realm of medical chemistry, one of the most valuable ways to categorise medications is by their molecular targets. This classification system organises drugs based on the precise biological molecules or pathways they engage with within the body to achieve their therapeutic outcomes. This method provides healthcare practitioners with insights into medication functionality, their mechanisms of action, and their optimal utilisation in addressing diverse medical ailments.

115 Option (d) is correct.

Explanation: There are various catalysts that can slow down the rate of a chemical reaction. These catalysts are known as inhibitors or negative catalysts. They work by

interfering with the reaction mechanism and reducing the rate of reaction.

116 Option (b) is correct.

Explanation: Central Nervous System (CNS): This includes the brain and spinal cord, which process and integrate information. Input nerves, which carry sensory information from the body to the CNS, transmit signals to the brain and spinal cord. Output nerves, which carry motor commands from the CNS to muscles and glands, originate from the brain and spinal cord.

117 Option (c) is correct.

Explanation: 5G technology is expected to enable and enhance several important aspects of modern telecommunications and networking, including the Internet of Things (IoT), edge computing, and network slicing.

118 Option (d) is correct.

Explanation: The Cassini-Huygens mission was a collaborative project between NASA (the United States), the European Space Agency (ESA), and the Italian Space Agency (ASI). The mission involved the Cassini spacecraft and the Huygens probe. Huygens was a probe provided by the European Space Agency (ESA) that travelled to Saturn attached to the Cassini spacecraft.

- Juno is a NASA spacecraft that was launched on August 5, 2011, with the primary mission of studying the planet Jupiter.

- Artemis is a series of planned lunar exploration missions led by NASA, with the goal of returning humans to the Moon and establishing a sustainable presence there.

- VERITAS (Venus Emissivity, Radio science, InSAR, Topography And Spectroscopy) is a proposed NASA mission to send an orbiter to Venus to study its surface and unlock the secrets of its past and present.

119 Option (b) is correct.

Explanation: Linen is a textile made from the fibres of the flax plant (*Linum usitatissimum*).

- Coir is a natural fiber extracted from the husk of coconuts (*Cocos nucifera*).

- Mohair is a luxurious and durable natural fiber that comes from the fleece of Angora goats.

- "Down cloth" typically refers to fabric or textiles that are filled with down feathers, specifically the fine and soft undercoating feathers of ducks or geese.

120 Option (c) is correct.

Explanation: Taeniasis is a parasitic infection in humans caused by different species of tapeworms, including *Taenia saginata* (commonly known as the beef tapeworm), *Taenia solium* (also known as the pork tapeworm), and *Taenia asiatica* (referred to as the Asian tapeworm). Infection occurs when individuals consume inadequately cooked or raw beef (for *T. saginata*) or pork (for *T. solium*), which may contain the larvae (cysticerci) of these tapeworms..

- Neurocysticercosis is a preventable parasitic infection caused by larval cysts (enclosed sacs containing the immature stage of a parasite) of the pork tapeworm

(*Taenia solium*). The larval cysts can infect various parts of the body causing a condition known as cysticercosis.

121 Option (c) is correct.

Explanation: The deep-sea submersible that imploded during an expedition to the Titanic shipwreck site was named "Titan." All five members onboard the Titan submersible were declared dead in a catastrophic implosion during a dive almost 13,000 feet below the sea level near the site where the Titanic sank in 1912. The submersible was operated by Ocean Gate Expeditions to explore the Titanic wreckage off the coast of Newfoundland.

122 Option (a) is correct.

Explanation:

- Beret - 3. A type of hat
- Stilettos - 4. A type of women's footwear
- Aviators - 2. A type of sunglasses
- Chignon - 5. A type of hairstyle
- Brogue - 1. A type of men's footwear

123 Option (b) is correct.

Explanation: The former President of the USA recently gave his interview in Athens, Greece. The interview took place in a historic location in Athens, highlighting the significance of the city as a backdrop for important discussions.

124 Option (c) is correct.

Explanation: The correct pairings are as follows:

- Flushing Meadows: US Open
- Venus Rosewater Dish: Wimbledon Trophy (Women)
- Roland Garros: French Open
- Australian Open (Women): Daphne Akhurst Memorial Cup

125 Option (b) is correct.

Explanation: The Ministry of Home Affairs completed the Mother Tongue Survey of India (MTSI) in November 2022, incorporating field videography to document the 576 languages spoken in the country. This survey represents the first comprehensive examination of mother tongues in India in over a century.

■ The Language Division of the Ministry of Home Affairs undertook this survey in collaboration with the Central Institute of Indian Languages (CIIL). The MTSI encompassed a total of 576 languages, consisting of 122 scheduled languages, 22 non-scheduled languages, and 432 languages not previously categorized.

126 Option (d) is correct.

Explanation: Tamil Nadu has recently initiated a State-Level Committee for Vulture Conservation (SLCVC), which was established in October 2022 with the primary objective of coordinating the execution of the Action Plan for Vulture Conservation (APVC) for the period 2020-2025.

127 Option (d) is correct.

Explanation: Ten captive-bred Asian Giant Tortoises (*Manouria emys*) were recently released into Intanki National Park in Nagaland, India. This marked a milestone as the first monitored rewilding effort for this critically endangered tortoise species in India. The Asian

Giant Tortoise, the largest tortoise species on mainland Asia, faces critical endangerment as per the IUCN Red List of Threatened Species.

128 Option (d) is correct.

Explanation: The country that has recently reaffirmed Arunachal Pradesh as an integral part of India is the United States (USA). This resolution rejects China's claims over large portions of Arunachal Pradesh and underscores the importance of the US-India partnership in the context of regional security in the Indo-Pacific region.

129 Option (c) is correct.

Explanation: Rudrankksh Balasaheb Patil of India achieved a significant milestone by clinching the gold medal in the Men's 10 m Air Rifle category at the ISSF World Championship held in Cairo.

130 Option (d) is correct.

Explanation: The National Education Policy, 2020 (NEP 2020) places a strong emphasis on the integration of vocational education into mainstream education starting from Grade 6.

131 Option (a) is correct.

Explanation: India signed the Economic Cooperation and Trade Agreement (IndAus ECTA) with Australia. This agreement is hailed as a significant economic milestone, offering zero-duty access to a considerable portion of India's exports to Australia, encompassing various key sectors.

132 Option (b) is correct.

Explanation: New Zealand recently enacted the Plain Language Act, a legislative measure mandating that government officials utilize clear, straightforward, and easily comprehensible English language when drafting official documents and maintaining government websites.

133 Option (b) is correct.

Explanation: Tillyardembiids, insect fossils bearing a resemblance to earwigs, have been unearthed in Russia, boasting an age of approximately 280 million years. Remarkably, this discovery establishes their existence as significantly older than previously known pollen-covered insects, predating them by approximately 120 million years. To offer some context, these Tillyardembiids even precede the age of the mosquitoes found in the fictional "Jurassic Park", which are estimated to be around 200 million years old.

134 Option (b) is correct.

Explanation: The UN Ocean Conference 2022 concluded with the unanimous adoption of the Lisbon Declaration titled "Our Ocean, our future, our responsibility". This declaration involves more than 150 countries committing to scale up science-based and innovative actions to address the pressing issues related to the state of the world's oceans.

135 Option (b) is correct.

Explanation: The horse was not a known animal in the Indus Valley Civilization. In contrast, the bull, elephant, and rhinoceros were familiar to the people of this ancient

civilization and are frequently depicted in their art and architecture.

136 Option (a) is correct.

Explanation: India Gate is not a UNESCO World Heritage Site. Red Fort (Lal Qila) and Qutub Minar are UNESCO World Heritage Sites in Delhi, India. India Gate is a prominent war memorial located in New Delhi, India.

137 Option (a) is correct.

Explanation: The concept of the Directive Principles of State Policy in the Indian Constitution was borrowed from the Constitution of Ireland. The Directive Principles of State Policy (DPSP) in the Indian Constitution are a set of guidelines and principles for the government's functioning. These principles are found in Part IV (Articles 36 to 51) of the Indian Constitution and outline the social, economic, and political objectives that the state should strive to achieve for the welfare of its citizens.

138 Option (b) is correct.

Explanation: Sikkim became a full-fledged state of the Union of India in 1975. In 1974, a referendum was held in Sikkim to decide whether the people of Sikkim wanted to merge with India. The 35th Amendment to the Indian Constitution added Sikkim to the list of Indian states, making it a full-fledged state of the Union of India.

139 Option (b) is correct.

Explanation: Pound Sterling is the costliest currency. Pound Sterling, often simply referred to as the Pound, is the currency of the United Kingdom and its territories. It is one of the oldest currencies still in use and is known for its relatively high exchange rate compared to other major currencies.

140 Option (a) is correct.

Explanation: The Bihar government has set a goal to achieve a pollution-free state by 2024. This objective will be realized through efforts to reduce carbon emissions, with assistance from UNEP (United Nations Environment Programme).

141 Option (d) is correct.

Explanation: The shipwrecks in Indian waters that have been explored at Sunchi Reef, Ameer Shoals, and Grande Island are located Off the coast of Goa.

142 Option (a) is correct.

Explanation:

1. G20 members represent around 85% of the global GDP. This means that a significant portion of the world's economic output is generated by these countries.
2. G20 members represent about two-thirds of the world population. These countries are home to a large portion of the global population.
3. G20 accounts for 90 percent of global GDP, 80 % of global trade.

143 No option is correct (Bonus).

144 Option (b) is correct.

Explanation: The Global Gender Gap Report is published by the World Economic Forum (WEF). The report is typically released annually and provides an assessment of gender disparities in various countries around the

world. It measures gender gaps in areas such as economic participation and opportunity, educational attainment, political empowerment, and health and survival.

145 Option (d) is correct.

Explanation: The Queen's reign extended beyond that of any other British monarch, endearing her to people worldwide as a deeply cherished and esteemed figure. Spanning over seven decades, she served as a devoted Head of the Commonwealth, connecting over two billion individuals across the globe.

■ On September 8, 2022, Queen Elizabeth II, the monarch of the United Kingdom and the Commonwealth realms, passed away at the age of 96 in Scotland's Balmoral Castle.

146 Option (a) is correct.

Explanation: 'DefExpo 2022' stands as India's primary showcase for Land, Naval, and Homeland Security systems. The event is centered around the theme 'Path to Pride', emphasizing India's dedication to attaining self-reliance in defense production, often referred to as Atmanirbhar.

147 Option (c) is correct.

Explanation: "Thadingyut" or "Thadingyat," is a traditional festival celebrated in Myanmar (Burma). It is also known as the "Festival of Lights" and is one of the most important and widely observed festivals in the country.

148 Option (c) is correct.

Explanation: The address of the White House, the official residence and workplace of the President of the United States, is as follows:

The White House

1600 Pennsylvania Avenue NW

Washington, D.C. 20500

USA The first President of the United States to take residence in the White House was John Adams.

The White House is widely regarded as a symbol of American democracy.

149 Option (b) is correct.

Explanation: Net metering is a billing arrangement for residential and commercial solar energy systems that allows customers who generate their own electricity to offset their energy costs and potentially earn credits for excess electricity they produce.

150 Option (b) is correct.

Explanation: The correct matching is as follows:

List-I (Colour)		List-II (Combination)	
(A)	Magenta	2.	Red and blue
(B)	Teal	3.	Blue, green and white
(C)	Mauve	4.	Blue, red and white
(D)	Cyan	1.	Green and Blue

