

## Mock Test - 02

## General Ability Test

**Directions: In the following question, out of the four alternatives, choose the one which best expresses the meaning of the underlined word.**

1. I found him arrogant and rude.  
(a) Haughty (b) Civilized  
(c) Certain (d) Humble
2. She is a chatterbox.  
(a) Speaks too much (b) Insensitive  
(c) Cries a lot (d) Dumb
3. He was feeling dizzy.  
(a) Happy (b) Excited  
(c) Sad (d) Giddy
4. He wants to live a lavish life.  
(a) luxurious (b) healthy  
(c) long (d) fit
5. She is a hot-tempered lady.  
(a) foolish  
(b) becomes angry easily  
(c) suffering with fever  
(d) feeble

**Directions: In the following question, out of the four alternatives, Select the option that is opposite in meaning to the underlined word/words and mark your response on your Answer Sheet accordingly.**

6. The institution was stigmatized as a last resort for the destitute.  
(a) Exalted (b) Improvised  
(c) Crucified (d) Dishonoured
7. Nothing could dampen her enthusiasm.  
(a) Lessen (b) Stimulate  
(c) Agonise (d) Crosscheck
8. The new dictator has inflicted upon so many punishments on the general public which represented barbarism.  
(a) Mercy (b) Cruelty  
(c) Strictness (d) Civilized
9. I didn't intend to denigrate her achievements.  
(a) Speak ill of (b) Apprise  
(c) Belittle (d) Extol

10. He has been very vocal in his criticism of the government's policy.  
(a) Outspoken (b) Vociferous  
(c) Reticent (d) Crucial

**Directions: Given below are some idioms/phrases followed by four alternative meanings to each. Choose the response (a), (b), (c), or (d) which is the most appropriate expression**

11. On cloud nine  
(a) Extremely sad (b) Flying high  
(c) Extremely happy (d) Daydreaming
12. To have the last laugh  
(a) To crack a joke (b) To laugh last time  
(c) To laugh badly (d) To succeed
13. To give a ring  
(a) To be engaged with someone  
(b) To gift someone a ring  
(c) To make a telephone call  
(d) To order someone
14. To spill the beans  
(a) To disclose something  
(b) To spill food  
(c) To cry over something  
(d) To lose something
15. To sail in the same boat  
(a) To sail together  
(b) To go on a voyage  
(c) To experience the same situation  
(d) To move slowly

**Directions: Each of the following sentences in this section has a blank space and four words or groups of words are given after the sentence. Select the word or group of words you consider the most appropriate for the blank space and indicate your response on the Answer Sheet accordingly.**

16. I knew that he was lying but I had no evidence with which to \_\_\_ his story.  
(a) refuse (b) refute  
(c) revoke (d) rebuke

**Directions: In the following question, sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four as your answer.**

17. Mr. Sahil \_\_\_\_\_ the letter on March 17 last year and then wrote on April 10 indicating that action was being taken.  
 (a) admitted (b) accepted  
 (c) responded (d) acknowledged
18. I don't trust him because he is a \_\_\_\_\_ guy.  
 (a) wisely (b) Blandiloquent  
 (c) Mendicant (d) coward
19. Given the current economic malaise facing the country, which can hardly be treated as a cyclical phenomenon, the economic \_\_\_\_\_ for 2020 also do not look too good.  
 (a) Portents (b) Augmentations  
 (c) Augers (d) Endorsements
20. She succeeded in proving his point with \_\_\_\_\_ logic.  
 (a) diabolical (b) irrefutable  
 (c) rational (d) doable
21. The fact that health and education are of \_\_\_\_\_ value in driving growth, creating employment and improving people's well-being is widely recognised.  
 (a) Instrumental (b) Plenary  
 (c) Supplementary (d) Cordial
22. We \_\_\_\_\_ still, afraid to show that we were awake.  
 (a) laid (b) lay  
 (c) lied (d) lain
23. These machines (A)/ are destroying (B)/ our ability of thinking (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
24. According to me, (A)/ we should spend (B)/ more money on education (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
25. She gave (A)/ her friends (B)/ a good advice (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
26. The programme is (A)/ about computers and (b)/ their affect on our lives. (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
27. My father could (A)/ not afford paying (B)/ for my education (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
28. I have always (A)/ the feeling that (B)/ she enjoysteaching us (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
29. She annoyed (A)/ that I had not (B)/ waited forher (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
30. He told me (A)/ that he watched (B)/ the film in TV (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
31. In all cases, disinfection (A)/ should be preceded(B)/ by thoroughly cleaning. (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
32. We put (A)/ a full stop in the end (B)/ of a sentence. (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
33. Pool attenders kept (A)/ a constant watch (B)/ onthe swimmers. (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
34. How many days back (A)/ had you joined (B)/this organisation? (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)
35. It is high time (A)/ the government eliminate (B)/ corruption. (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)

**Directions: Each item in this section has a sentence with three parts labelled as (a), (b) and (c). Read each sentence to find out whether there is any error in any underlined part and indicate your response on the Answer Sheet against the corresponding letter i.e., (a) or (b) or (c). If you find no error, your response should be indicated as (d).**

**Directions: Read the passages given below and answer the questions that follow.**

There are eccentric people who enjoy saving money for no other reason than the pleasure of saving money. It is a passion like drinking, and a hobby like collecting of China. Does it usually begin with a moneybox? Imagine a painter drawing the Miser's Progress in a number of scenes, with the first scene showing a benevolent grandfather holding out a harmless looking tin moneybox to an infant scarcely able to walk. The gift should always be accompanied by a box of tools. As a young man the infant has grown into a miser. By the age of forty he has a substantial bank account. But he persuades himself that he is so poor that he never goes to the theater, never invites a friend to dinner. By sixty he is a rich man and is convinced that he is all but a pauper.

36. A miserly man of forty does not go to the theater because  
 (a) he has no liking for plays  
 (b) he does not want to waste his valuable time  
 (c) he persuades himself that he is very poor  
 (d) he is frightened by the darkness of the theater hall
37. Some people enjoy saving money because  
 (a) they are able to live a happy life  
 (b) saving is a passion with them  
 (c) they are able to enjoy the pleasures of life  
 (d) they can entertain others
38. If a moneybox is given to a child, what should accompany it?  
 (a) Tips on the advantages of saving money  
 (b) Guidelines to preserve it  
 (c) Instructions on when and how to open it  
 (d) A box of tools to open it

**Directions: Read the passages given below and answer the questions that follow.**

In the fete, for a ticket costing eight annas you stood a chance of acquiring a variety of articles - pincushions, sewing machines, cameras or even a road engine. One evening they drew ticket number 1005, and I happened to own the other half of the ticket. They declared that I became the owner of a road engine! Don't ask me how a road engine came to be included among the prizes. It is more than I can tell you. I looked stunned. People gathered round and gazed at me as if I were some curious animals. 'Fancy anyone becoming the owner of a road engine!' some people muttered and giggled.

39. The writer purchased a ticket  
 (a) to win a prize  
 (b) to enter the fete  
 (c) to buy some eatables in the fete  
 (d) to play some games

40. 'they' in the paragraph stands for  
 (a) the writer's friends  
 (b) the organizers of the fete  
 (c) the stall owners in the fete  
 (d) the onlookers
41. The writer was stunned because  
 (a) he did not win a prize  
 (b) he was at a loss as to what to do with the prize  
 (c) people giggled  
 (d) the fete organizers were rude to him

**Directions: In the following items, some parts of the sentence have been jumbled up. You are required to rearrange these parts which are labelled P, Q, R and S to produce the correct sentence. Choose the proper sequence and mark in your Answer Sheet accordingly.**

42. far out into the seaP  
 for the next two weeks there were further  
 \_\_\_\_\_  
 explosionsQ  
 \_\_\_\_\_  
 which hurled ashes and debris  
 \_\_\_\_\_  
 R S

The correct sequence should be

- (a) Q - R - P - S  
 (b) R - S - P - Q  
 (c) Q - R - S - P  
 (d) S - R - P - Q

**Directions: Find the erroneous parts, If any.**

43. Everybody (A)/ among your friends (B)/ like playing. (C)/ No error (D)  
 (a) (A) (b) (B)  
 (c) (C) (d) (D)

**Directions: In the following items, some parts of the sentence have been jumbled up. You are required to rearrange these parts which are labelled P, Q, R and S to produce the correct sentence. Choose the proper sequence and mark in your Answer Sheet accordingly.**

44. He was a man even if he had to starve  
 \_\_\_\_\_  
 P  
 \_\_\_\_\_  
 who would not beg borrow or stealR  
 \_\_\_\_\_  
 Q  
 \_\_\_\_\_  
 from anyone  
 \_\_\_\_\_  
 S

The correct sequence should be

- (a) P - Q - R - S  
 (b) P - R - Q - S  
 (c) Q - R - S - P  
 (d) Q - P - R - S

45. William Shakespeare in his life time  
P  
the great English dramatist  
Q  
wrote thirty-five plays and several poems  
R S  
The correct sequence should be  
(a) P - Q - R - S (b) R - S - P - Q  
(c) Q - S - R - P (d) Q - R - S - P
46. Whenever I am with an old friend of mine  
P  
in New Delhi to have dinner Q I always try S  
R  
The correct sequence should be  
(a) S - Q - P - R (b) Q - S - R - P  
(c) R - P - S - Q (d) P - S - R - Q
47. I don't know P must have thought Q  
R  
what people sitting next to me  
S  
but I came away  
The correct sequence should be  
(a) R - S - Q - P (b) R - Q - S - P  
(c) P - Q - R - S (d) P - R - Q - S
- Directions: Select the synonym of the word or group of words (Occurring in the sentence in capital letters) as per the context.**
48. The policemen kept on questioning the criminal but failed to ELICIT the truth.  
(a) Evoke (b) Wrest  
(c) Obtain (d) Extort
49. Teaching in universities is now considered a LUCRATIVE job.  
(a) Risky (b) Profitable  
(c) Honourable (d) Undignified
50. He is a man of EXTRAVAGANT habits.  
(a) Sensible (b) Careful  
(c) Prodigal (d) Balanced
51. Which of the following statement is not correct about Cripps proposal?  
(a) Establishment of constituent assembly  
(b) Establishment of dominion  
(c) Right of province to make separate constitution  
(d) India will not participate in the second world war
52. Government of India Act 1919 provided for the dyarchy at the level of provinces. What is the meaning of dyarchy?  
(a) Rule of Law  
(b) Election of Representatives  
(c) Double Rule/Co Rule  
(d) Nominated Members
53. Mahayana-shraddhotpada-shastra, the Buddhacarita and Mahalankara was written by  
(a) Nagarjuna (b) Nagasena  
(c) Kalidasa (d) Ashvagosha
54. Mahavamsa and Dipavamsa is related to which of the following Religion?  
(a) Jainism (b) Hinduism  
(c) Christianity (d) Buddhism
55. Who among the following presided the first session of Indian National Congress in 1885?  
(a) G. K. Gokhale (b) W. C. Banerjee  
(c) Dada Bhai Naroji (d) S N Banerji
56. Which of the following social reformer started the Temple entry Movement?  
(a) E. V. Ramaswamy Naicker  
(b) Sree Narayan Guru  
(c) M. G. Ranade  
(d) Raghunath
57. Which of the following were the demands of Home rule league?  
1. National Education  
2. Swadeshi  
3. Self-rule or Home rule  
(a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) All of the above
58. Who among the following was the author of Tarikh-i-Alai, which contains the details of the first few years of Sultan Alauddin Khilji ?  
(a) Ziauddin Barani  
(b) Shams Siraj Afif  
(c) Amir Khusrau  
(d) Yahiya bin Ahmad
59. Which of the following act is also known as legalised communalism?  
(a) Government of India Act 1919  
(b) Indian Council Act of 1892  
(c) Government of India Act 1935  
(d) Government of India Act 1909

60. The Passive Resistance Association was first formed by Mahatma Gandhi in South Africa in 1906 to organize a campaign against the introduction of  
 (a) Poll Tax  
 (b) Certificate of Registration  
 (c) Legislations against Indian businessman  
 (d) Legislations to disenfranchise the Indians
61. Who among the following was a contemporary of Gautam Buddha ?  
 (a) Nagarjuna  
 (b) Kanishka  
 (c) Kautilya  
 (d) Mahavir
62. Consider the following statements:  
 1. Gandhiji launched the Rowlatt Satyagraha in 1919 because of the British measures to impose censorship on the Press.  
 2. Gandhiji launched the Rowlatt Satyagraha because of the British policy of permitting detention without trial.  
 3. The Rowlatt Act was restricted to the Bombay and Madras Presidency.  
 4. The agitation against the Rowlatt Act reached its climax with the Jallianwala Bagh Massacre in Amritsar.  
 Which of the statements given above is correct?  
 (a) 1, 2 and 3  
 (b) 2 and 3 only  
 (c) 1, 2 and 4  
 (d) 1 and 4 only
63. Which of the following is not a feature of Indian Federalism?  
 (a) Written Constitution  
 (b) All India Services  
 (c) Separation of Power  
 (d) Dual Government
64. Punchi Commission is related to which of the following provision of Indian Constitution?  
 (a) Center-State relation  
 (b) Panchayati Raj  
 (c) Fundamental Rights  
 (d) Constitution of National Commission for women
65. Which of the following constitutional body is responsible to maintain the electoral democracy in our country?  
 (a) Finance Commission  
 (b) Comptroller and Auditor General of India  
 (c) Attorney General of India  
 (d) Election Commission
66. Which of the following institutions was not created by the 73rd constitutional amendment?  
 (a) State Election commission  
 (b) District Planning Committee  
 (c) State Finance Commission  
 (d) Autonomous District Council
67. Who among the following was not a member of constituent assembly but Constitutional Advisor to constituent assembly?  
 (a) Sarojini Naidu  
 (b) B. R. Ambedkar  
 (c) B. N. Rao  
 (d) K. M. Munshi
68. Which of the following writ can be issued by the supreme court against the delayed implementation of any policy/ legislation by executives.  
 (a) Certiorari (b) Mandamus  
 (c) Quo Warranto (d) Prohibition
69. Dr. B. R. Ambedkar compared which of the following Indian constitutional authorities to the President of the United States of America?  
 (a) President  
 (b) Vice President  
 (c) Prime Minister  
 (d) Governor
70. Which of the following is not a Fundamental Right mentioned in the Indian Constitution?  
 (a) Right to Vote (b) Right to Freedom  
 (c) Right to education (d) Right to equality
71. Who among the following has a right to speak and otherwise take part in proceedings of either House of Parliament and to be a member of any parliamentary committee but is not entitled to vote ?  
 (a) Chairman, Finance Commission  
 (b) The Attorney General  
 (c) The Comptroller and Auditor General  
 (d) The Chief Election Commissioner
72. The 'Basic Structure Doctrine' was enunciated by the Supreme Court during the:  
 (a) Golak Nath case  
 (b) Maneka Gandhi case  
 (c) Kesavananda Bharati case  
 (d) S R Bommai case
73. What is the name of the largest volcano in our solar system?  
 (a) Olympus Mons (b) Mauna Loa  
 (c) Mount Everest (d) Krakatoa



74. The process by which new oceanic crust is formed at mid-ocean ridges is called  
 (a) Subduction (b) Convection  
 (c) Plate divergence (d) Plate convergence
75. The layer of the Earth that is liquid and generates the planet's magnetic field is the:  
 (a) Crust (b) Mantle  
 (c) core (d) None of the above
76. Which of the following is an example of an erosional landform?  
 (a) Beach (b) Delta  
 (c) Mesa (d) Alluvial fan
77. Which of the following is not a type of volcano?  
 (a) Shield volcano  
 (b) Composite volcano  
 (c) Cinder cone volcano  
 (d) Plateau volcano
78. Which of the following gases makes up the majority of the Earth's atmosphere?  
 (a) Nitrogen (b) Oxygen  
 (c) Carbon Dioxide (d) Argon
79. Which among the following is a warm ocean current of the Pacific Ocean?  
 (a) Kuroshio Current (b) Humboldt Current  
 (c) Canaries Current (d) Labrador Current
80. Which one of the following is the oldest fold mountain range?  
 (a) Aravali (b) Western Ghat  
 (c) Eastern Ghat (d) Annamalai
81. The Chambal River is a tributary of which of the following rivers?  
 (a) Ganges (b) Yamuna  
 (c) Brahmaputra (d) Godavari
82. Which one of the following sets of states does not receive most of its rainfall from SW monsoon during the months of June to September?  
 (a) Arunachal Pradesh and Gujarat  
 (b) Assam and Karnataka  
 (c) Himachal Pradesh and Rajasthan  
 (d) Tamil Nadu and Jammu & Kashmir
83. In which one among the following states is the percentage of Scheduled Tribes population to its total population highest?  
 (a) Chhattisgarh  
 (b) Madhya Pradesh  
 (c) Mizoram  
 (d) Rajasthan
84. Consider the following statements:  
 1. The vernal equinox falls on March 21.  
 2. On equinox, the sun is directly overhead at the equator.  
 3. The changes in the day length on equinox result from the changes in the tilt of the earth with respect to the sun.  
 Which of the statements above is/are correct?  
 (a) 1 and 2 only (b) 1 only  
 (c) 2 only (d) 2 and 3 only
85. Regular intake of fresh fruit and vegetable are recommended in the diet is they are good source of antioxidant. How do antioxidant help a person to maintain the health and promoting longevity?  
 (a) They activate the enzyme necessary for a vitamin synthesis in the body and help to prevent the vitamin deficiency  
 (b) They prevent excessive oxidation of carbohydrate, fat and protein in the body and help in order about the unnecessary wastage of energy.  
 (c) They neutralise the free radical produce in the body during metabolism  
 (d) The activate specific gene in the cell of the body and help in delay the aging process
86. Which of the following organelle play important roles in formation of lysosomes?  
 (a) Nucleus (b) Golgi bodies  
 (c) ER (d) Vacuole
87. Consider the following statements. Apical dominance in plants  
 1. Allows plant growth.  
 2. Retards the growth of lateral buds.  
 3. Enhances the growth of lateral buds. Which of these statements is/are correct?  
 (a) Only 1  
 (b) Only 2  
 (c) Both (a) and (b)  
 (d) Neither 1 nor 2
88. Which of the following is not communicable disease?  
 (a) Tuberculosis (b) Malaria  
 (c) Scurvy (d) Diarrhea
89. Inner mucosa of small intestine has finger like projection called "Villi" function as?  
 (a) Secret digestive enzymes  
 (b) Increase surface for digestion and absorption  
 (c) Helps in excretion of food  
 (d) Helps in maintaining basic environment of

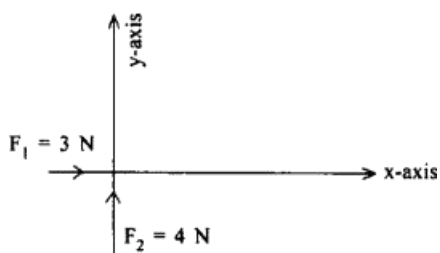
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small intestine

90. Match the Column I with Column II and select the correct answer using the codes given below:
- | Column-I<br>(Types of pollination) | Column-II<br>(Pollinator) |
|------------------------------------|---------------------------|
| A. Anemophily                      | 1. Birds                  |
| B. Ornithophily                    | 2. Insects                |
| C. Entomophily.                    | 3. Wind                   |
| D. Chiropterophily.                | 4. Water                  |
|                                    | 5. Bats                   |
- (a) A-1, B-3, C-4, D-5  
(b) A-3, B-1, C-2, D-5  
(c) A-3, B-1, C-4, D-2  
(d) A-1, B-3, C-4, D-2
91. Pteridophytes are\_\_\_\_\_.
- (a) Seeded Vascular plant  
(b) Non-seeded Vascular plant  
(c) Non-Vascular seeded plant  
(d) Non-Vascular Non-Seeded
92. Which of the following Phenomenon is the only means of gaseous transport in plants?
- (a) Osmosis (b) Diffusion  
(c) Adsorption (d) Imbibition
93. **Statement I:** Growth of plants is smooth with a complete fertilizer.  
**Statement II:** A complete fertilizer always contains N, P, K.
- (a) Both the statements are individually true and Statement II is the correct explanation of Statement I  
(b) Both the statements are individually true but Statement II is not the correct explanation of Statement I  
(c) Statement I is true but Statement II is false  
(d) Statement I is false but Statement II
94. The genetic material of bacteria is found is
- (a) nucleus (b) cytoplasm  
(c) cell membrane (d) ribosome
95. Which of the following is not an example of Chemical Change?
- (a) Burning (b) Shredding of papers  
(c) Cooking (d) Rotting
96. Arrange the following in order of increasing radii (A)  $Mg^{2+}$  (B)  $Mg^+$  (C) Mg
- (a)  $C > A > B$  (b)  $C > B > A$   
(c)  $A > B > C$  (d) None of the above
97. Select the correct IUPAC name for the given organic compound  $C(CH_3)_3CH_2Cl$  ?
- (a) 3 - chloro-2, 2-dimethylpropane  
(b) 1 - chloro-2, 2-dimethylpropane  
(c) 5 - chloro-1, 2-dimethylpropane  
(d) 1 - chloropentane
98. When non-metal combine with oxygen, nature of ore formed will be?
- (a) Basic only (b) Acidic only  
(c) Basic and Neutral (d) Acidic and Neutral
99. In electrolytic cell flow of electrons occurs from
- (a) Cathode to anode (b) Anode to Cathode  
(c) Both a and b (d) None of the above
100. Consider the following statement  
I. Soap cannot be used in acidic water  
II. Ionic part of soap is  $COO^- Na^+$   
III. Soap dissolve in water faster than detergent  
Which of the given statements above is/are correct?
- (a) I and II (b) II and III  
(c) Only III (d) Only II
101. Difference between diamond and graphite is that
- (a) Graphite combines with oxygen to form carbon dioxide but diamond does not  
(b) The atom in each has different masses  
(c) The crystal structure in the diamond is different from that in graphite  
(d) All of the above.
102. Mark the correct statement for the corrosion
- (a) It fastly coats the surface of metallic object  
(b) It's example are -rusting of iron, tarnishing of silver  
(c) It does not cause damage to building, ship made metals especially that are made up of iron  
(d) All of the above
103. Hydrogen fluoride is a liquid unlike other hydrogen halide because
- (a) HF molecule associate due to hydrogen bonding  
(b) HF is highly reactive  
(c) HF is the weak acid of all hydrogen halides  
(d) Fluorine atoms is smallest of all halides
104. Which of the following statement concerning ionization energy is not correct?
- (a) The second ionization energy is always more than the first  
(b) Within a group there is gradual increase in ionisation energy  
(c) Ionisation energy of Be is more than B  
(d) Ionization energy of noble gases are high
105. Which one of the following carbon compounds will not give a sooty flame?
- (a) Benzene (b) Hexane  
(c) Naphthalene (d) Anthracene

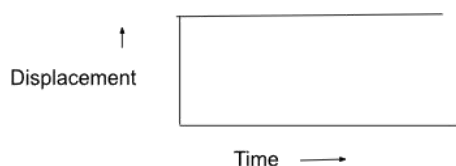


106. Glass is a  
 (a) liquid  
 (b) colloid  
 (c) non-crystalline amorphous solid  
 (d) crystalline solid
107. Two forces, one of 3 Newtons and another of 4 Newtons are applied on a standard 1 kg body, placed on a horizontal and frictionless surface, simultaneously along the x-axis and the y-axis, respectively, as shown below:



The magnitude of the resultant acceleration is:

- (a)  $7 \text{ m/s}^2$                       (b)  $1 \text{ m/s}^2$   
 (c)  $5 \text{ m/s}^2$                       (d)  $\sqrt{7} \text{ m/s}^2$
108. In the graph of displacement versus time shown below. Which is correct?



- (a) The body is at rest  
 (b) The body has some initial velocity  
 (c) The body moves with constant speed  
 (d) The body moves with constant velocity

109. When the tension in a string or rope will be maximum if a body moves at a constant acceleration in ?  
 (a) Upward motion  
 (b) Downward motion  
 (c) Just suspend (not moving)  
 (d) Rise at constant rate

110. The final image formed by a compound microscope is  
 (a) magnified, real and erect  
 (b) diminished, virtual and erect  
 (c) magnified, virtual and inverted  
 (d) diminished, virtual and inverted

111. Newton's second law of motion connects  
 (a) Momentum and acceleration  
 (b) Change of momentum in velocity  
 (c) Rate of change of momentum and external force  
 (d) Rate of change of force and momentum

112. The use of a thermostat is  
 (a) to measure temperature  
 (b) to increase temperature  
 (c) to keep constant temperature  
 (d) to convert temperature into electricity
113. An EMF of 5 volt is produced by self-inductance when the current changes at Steady rate from 3 to 2 A in 1 ms the value of self-inductance is  
 (a) 500 H                              (b) 250 H  
 (c) 5 mH                                (d) Zero

114. Two lights A and B have wavelengths  $\lambda$  and  $2\lambda$  then how many times the intensities of light will be related to each other?  
 (a) 8 times                              (b) 16 times  
 (c) 12 times                            (d) 4 times

115. Light enters from air to glass having refractive index 1.5. What will be speed of light in glass if the speed of light in air is  $3 \times 10^8 \text{ m/s}$ .  
 (a)  $2 \times 10^5 \text{ m/s}$                       (b)  $2 \times 10^7 \text{ m/s}$   
 (c)  $2 \times 10^8 \text{ m/s}$                       (d)  $2 \times 10 \text{ m/s}$

116. **Assertion:** Twinkling of stars is due to combine effect of reflection and refraction  
**Reason:** As change in the refractive index between media, the velocity of light changes from one medium to another medium  
 (a) Both assertion and reason are correct and reason is correct explanation of assertion  
 (b) Both assertion and reason are correct but reason is not correct explanation of assertion  
 (c) Assertion is correct but reason is incorrect  
 (d) Both Assertion any reason are incorrect

117. Which of the following shows the correct relation between magnification, object distance and focallength?  
 (a)  $M = \frac{f}{u + f}$                               (b)  $M = \frac{u - f}{u + f}$   
 (c)  $M = \frac{u}{u + f}$                               (d)  $M = \frac{f}{u - f}$

118. An electric wire of resistance  $10\Omega$  is carrying a current of 5 Ampere. Find out the power in this circuit.  
 (a)  $150\Omega$                               (b)  $250\Omega$   
 (c)  $200\Omega$                               (d)  $100\Omega$

119. An electrical circuit consists of a resistance of  $5\Omega$  and is connected to a battery of 12 Volt. Find out the current flowing throughout the circuit.  
 (a) 1.5 Amp                              (b) 2.4 Amp  
 (c) 3 Amp                                 (d) 3.5 Amp

120. A long solenoid is formed by winding 20 turns/cm. What current is necessary to produce a magnetic field of 20mT inside the solenoid?  
 (a) 6 A (b) 8 A  
 (c) 9 A (d) 10 A
121. In which of the following transfer of heat takes place by conduction?  
 (a) solid, liquid, gas (b) only solid  
 (c) liquid and gas (d) solid and liquid
122. If a charged particle (+q) is projected with certain velocity parallel to the magnetic field, then it will  
 (a) trace helical path  
 (b) trace circular path  
 (c) continue its motion without any change  
 (d) come to rest instantly
123. A ray of light travels from a medium of refractive index  $n_1$  to a medium of refractive index  $n_2$ . If angle of incidence is  $i$  and angle of refraction is  $r$ , then  $\frac{\sin i}{\sin r}$  is equal to  
 (a)  $n_1$  (b)  $n_2$   
 (c)  $\frac{n_2}{n_1}$  (d)  $\frac{n_1}{n_2}$
124. Ultrasonic waves of frequency  $3 \times 10^5$  Hz are passed through a medium where speed of sound is 10 times that in air (Speed of sound in air is 300 m/s). The wavelength of this wave in that medium will be of the order of  
 (a) 1 cm (b) 10 cm  
 (c) 100 cm (d) 0.1 cm
125. The displacement-time graph of a particle acted upon by a constant force is  
 (a) a straight line  
 (b) a circle  
 (c) a parabola  
 (d) any curve depending upon initial conditions
126. The product of conductivity and resistivity of a conductor  
 (a) depends on pressure applied  
 (b) depends on current flowing through conductor  
 (c) is the same for all conductors  
 (d) varies from conductor to conductor
127. An object is placed 10 cm in front of a convex lens of focal length 15 cm. The image produced will be  
 (a) Real and magnified  
 (b) Virtual and magnified  
 (c) Virtual and reduced in size  
 (d) Real and reduced in size
128. Which one of the following is the theme of the International Day for Monuments and Sites (World Heritage Day) 2022?  
 (a) The Heritage of Sport  
 (b) Cultural Heritage and Sustainable Tourism  
 (c) Heritage and Culture  
 (d) Heritage and Science
129. The Egmont Group, recently in the news, is related to  
 (a) Sharing financial information  
 (b) Sharing geographical location  
 (c) Defense Manufacturing  
 (d) Sharing of Supply chain Management
130. The term Middle Eastern Quad involves countries:  
 (a) India, Israel, United States and Russia  
 (b) Russia, China, Turkey and Pakistan  
 (c) Russia, Israel, Turkey and India  
 (d) India, Israel, UAE, and United States of America
131. Satyabhama portal is related to which of the following Ministry of Government of India  
 (a) Ministry of Mines  
 (b) Ministry of Petroleum and Natural Gas  
 (c) Ministry of Home Affairs  
 (d) Ministry of External Affairs
132. Who was the recipient of the Major Dhyan Chand Khel Ratna Award in 2022?  
 (a) Sharath Kamal Achanta  
 (b) Lakshya Sen  
 (c) Avinash Sable  
 (d) Nikhat Zareen
133. Nikhat Zareen who won the gold medal in commonwealth games is related to which of the following sport?  
 (a) Wrestling (b) Chess  
 (c) Weight Lifting (d) Boxing
134. What is the rank of India in the Global Innovation Index 2022?  
 (a) 40<sup>th</sup> (b) 41<sup>st</sup>  
 (c) 42<sup>nd</sup> (d) 43<sup>rd</sup>
135. Which one of the following nations is not a permanent member of G7?  
 (a) France  
 (b) China  
 (c) Russia  
 (d) United States of America

136. Who among the following is the winner of the French Open 2022 Men's Singles Final?  
 (a) Novak Djokovic (b) Rafael Nadal  
 (c) Stefanos Tsitsipas (d) Daniil Medvedev
137. REAIM 2023 is related to which of the following initiative?  
 (a) Artificial Intelligence  
 (b) Maritime Policy  
 (c) Foreign Policy  
 (d) Trade Policy
138. What is the theme of International Yoga Day 2022?  
 (a) Yoga for humanity  
 (b) Yoga for climate action  
 (c) Yoga for well-being  
 (d) Yoga for peace
139. T Rama Rao, who died in the year 2022, is related to  
 (a) Medicine  
 (b) Indian classical dance  
 (c) Indian music  
 (d) Indian film maker
140. eSanjeevani, the free telemedicine service of the Government of India, was recently integrated with the  
 (a) Ayushman Bharat Digital Mission  
 (b) Aam Aadmi Bima Yojana  
 (c) Pradhan Mantri Suraksha Bima Yojana  
 (d) Universal Health Insurance Scheme
141. Sparsh Scheme is related to which of the following objective:  
 (a) foreign policy  
 (b) automating defense pension sanction  
 (c) virtual currency  
 (d) PDS distribution
142. Harimau Shakti 2022'' joint military exercise is related to which of the following country?  
 (a) Malaysia (b) Maldives  
 (c) Japan (d) Israel
143. UN panel decided to put Great Barrier Reef in danger list. What is the geographical location of Great Barrier Reef?  
 (a) Australia (b) Indonesia  
 (c) India (d) Japan
144. Koneru Humpy excels in which one of the following sports?  
 (a) Boxing (b) Table Tennis  
 (c) Chess (d) Billiards
145. 'Naseem-Al-Bahr' is a bilateral naval exercise between India and  
 (a) A-1, B-3, C-4, D-5  
 (b) A-3, B-1, C-2, D-5  
 (c) A-3, B-1, C-4, D-2  
 (d) A-1, B-3, C-4, D-2
146. The United Nations Charter was signed by 51 original members of the United Nations in 1945 at the  
 (a) Hague Conference  
 (b) London Conference  
 (c) San Francisco Conference  
 (d) Berlin Conference
147. In a first, India is to export BrahMos missile to  
 (a) Bhutan  
 (b) Philippines  
 (c) Maldives  
 (d) Nepal
148. Legendary Kathak dancer Pandit Birju Maharaj died recently. He was the doyen of which one of the following Gharanas of Kathak?  
 (a) Jaipur  
 (b) Raigarh  
 (c) Lucknow  
 (d) Banaras
149. Consider the following pairs of vaccines and category/type:  
 1. Covaxin: Inactivated pathogen-based vaccine  
 2. Covishield: mRNA vaccine  
 3. Sputnik V: Viral vector-based vaccine  
 Which of the pairs given above is/are correctly matched?  
 (a) 1 only  
 (b) 2 and 3 only  
 (c) 1 and 3 only  
 (d) 1, 2 and 3
150. The maiden Indian Navy - European Union Naval Force (IN-EUNAVFOR) Exercise (2021) was conducted in  
 (a) Gulf of Mannar  
 (b) Gulf of Aden  
 (c) Gulf of Khambhat  
 (d) Gulf of Aqaba

## Answer Key

1.	(a)	39.	(a)	77.	(d)	115.	(c)
2.	(a)	40.	(b)	78.	(a)	116.	(c)
3.	(d)	41.	(b)	79.	(a)	117.	(d)
4.	(a)	42.	(c)	80.	(a)	118.	(b)
5.	(b)	43.	(c)	81.	(b)	119.	(b)
6.	(a)	44.	(c)	82.	(d)	120.	(c)
7.	(b)	45.	(d)	83.	(c)	121.	(b)
8.	(d)	46.	(d)	84.	(a)	122.	(c)
9.	(d)	47.	(d)	85.	(a)	123.	(c)
10.	(c)	48.	(a)	86.	(b)	124.	(a)
11.	(c)	49.	(b)	87.	(b)	125.	(c)
12.	(d)	50.	(c)	88.	(c)	126.	(c)
13.	(c)	51.	(d)	89.	(b)	127.	(b)
14.	(a)	52.	(c)	90.	(b)	128.	(d)
15.	(c)	53.	(d)	91.	(b)	129.	(a)
16.	(b)	54.	(d)	92.	(b)	130.	(d)
17.	(d)	55.	(b)	93.	(b)	131.	(a)
18.	(b)	56.	(b)	94.	(b)	132.	(a)
19.	(a)	57.	(d)	95.	(b)	133.	(d)
20.	(b)	58.	(c)	96.	(b)	134.	(d)
21.	(a)	59.	(d)	97.	(b)	135.	(c)
22.	(b)	60.	(b)	98.	(d)	136.	(b)
23.	(c)	61.	(d)	99.	(b)	137.	(a)
24.	(a)	62.	(c)	100.	(b)	138.	(a)
25.	(c)	63.	(b)	101.	(c)	139.	(d)
26.	(c)	64.	(a)	102.	(d)	140.	(a)
27.	(b)	65.	(d)	103.	(a)	141.	(b)
28.	(a)	66.	(d)	104.	(a)	142.	(a)
29.	(a)	67.	(c)	105.	(b)	143.	(a)
30.	(c)	68.	(a)	106.	(c)	144.	(c)
31.	(c)	69.	(c)	107.	(c)	145.	(d)
32.	(b)	70.	(a)	108.	(a)	146.	(c)
33.	(a)	71.	(b)	109.	(a)	147.	(b)
34.	(b)	72.	(c)	110.	(c)	148.	(c)
35.	(b)	73.	(a)	111.	(c)	149.	(c)
36.	(c)	74.	(a)	112.	(c)	150.	(b)
37.	(b)	75.	(c)	113.	(c)		
38.	(d)	76.	(d)	114.	(b)		

## Hints and Solutions

1. **(a)**  
**Key Concept:** Synonyms  
**Explanation:**  
 Arrogant / haughty - behaving in a proud, unpleasant way, showing little thought for other people  
 Civilized - well organized socially with a very developed culture and way of life  
 Certain - sure  
 Humble - showing you do not think that you are as important as other people  
 Clearly 'haughty' is the nearest in meaning to the given word.  
 Hence, the correct option is **(a)** i.e., '**Haughty**'
2. **(a)**  
**Key Concept:** Synonyms  
**Explanation:**
- Chatterbox is a term used to describe a person who speaks too much.
  - Insensitive means indifferent and Dumb means unwilling to speak.
  - So options (b), (c) and (d) are incorrect.
  - Hence, option **(a)** is the correct synonym.
3. **(d)**  
**Key Concept:** Synonyms  
**Explanation:**
- "Dizzy" means feeling the sensation of spinning around, vertigo.
  - So, option (d) giddy is the correct option because giddy also means having the sensation of whirling.
  - Hence, option **(d)** is correct.
4. **(a)**  
**Key Concept:** Synonyms  
**Explanation:**  
 The word "lavish" refers to rich or wealthy.  
 Also, "luxurious" means having a lot of money and luxuries.  
 Hence, the word which best expresses the meaning of lavish is option (a) luxurious.  
 Hence, option **(a)** is correct.
5. **(b)**  
**Key Concept:** Synonyms  
**Explanation:**
- "Hot tempered" means to become angry on trivial issues.
  - "Feeble" means weak or lacking strength.
  - The option which best describes the meaning of hot tempered is option (b) becomes angry easily.
  - Hence, option **(b)** is correct.
6. **(a)**  
**Key Concept:** Antonyms  
**Explanation:**  
 Exalt – to praise  
 Stigmatise / dishonour - Describe or regard as worthy of disgrace or great disapproval.  
 Improvise - to make or do something using whatever is available, usually because you do not have what you really need.  
 Crucify - to criticize or punish somebody very severely  
 Clearly 'Exalt' is the nearest opposite of the given word.  
 Hence, the correct option is **(a)** i.e., '**Exalted**'
7. **(b)**  
**Key Concept:** Antonyms  
**Explanation:**  
 Dampen/ Lessen - Make less strong or intense.  
 Stimulate – to excite  
 Agonise - Undergo great mental anguish through worrying about something.  
 Crosscheck - to make sure that information, figures etc. are correct by using a different method or system to check them.  
 Clearly 'stimulate' is the nearest opposite of given word.  
 Hence, the correct option is **(b)** i.e., '**Stimulate**'
8. **(d)**  
**Key Concept:** Antonym  
**Explanation:**  
**Barbarism (Noun)**
- "Barbarism" means lack of culture or civilization.
  - Mercy means forgiveness.
  - Cruelty refers to the quality of being cruel brutal.
  - Strictness refers to the condition of being stern or strict.
  - Civilized means showing culture or civilization.
  - So, option **(d)** is the correct antonym.

9. (d)  
**Key Concept:** Antonyms  
**Explanation:**  
 Denigrate/ Belittle - to criticize somebody/something unfairly; to say somebody/something does not have any value or is not important  
 Extol – to praise  
 Apprise – to inform  
 Speak ill of - to say or think bad things about somebody  
 Clearly 'Extol' is the nearest opposite of given word.  
 Hence, the correct option is (d) ie, '**Extol**'
10. (c)  
**Key Concept:** Antonyms  
**Explanation:**  
 Vocal/outspoken - telling people your opinions or protesting about something loudly and with confidence.  
 Reticent - unwilling to tell people about things.  
 Vociferous - expressing your opinions or feelings in a loud and confident way  
 Crucial – important  
 Clearly 'Reticent' is the nearest opposite of a given word.  
 Hence, the correct option is (c) i.e., '**Retient**'
11. (c)  
**Key Concept:** Idioms and Phrases  
**Explanation:**
- "On cloud nine" means extremely happy.
  - For example:- When she passed the exam with flying colors, she was on cloud nine.
  - Hence, option (c) is the correct option.
- Additional information:**
- " Flying colors " is an idiom which means to do something successfully or in the best possible way.
  - "Daydreaming " means thinking of pleasant thoughts to escape the reality.
12. (d)  
**Key Concept:** Idioms and Phrases  
**Explanation:**
- "To have the last laugh" means to be victorious at the end of an argument or to achieve success in spite of the contempt.
  - For example:- Everyone mocked her when she started playing cricket but she had her last laugh when she succeeded in being selected in the Indian national cricket team of women.
  - Hence, option (d) is the correct option.
13. (c)  
**Key Concept:** Idioms and Phrases  
**Explanation:**
- To give a ring means to call someone on the telephone.
  - So, the option which best expresses the meaning of the idiom is option (c).
  - Hence, option (c) is the correct answer.
14. (a)  
**Key Concept:** Idioms and Phrases  
**Explanation:**
- "To spill the beans" means to reveal a secret.
  - For example:- She planned a birthday surprise for her mother but her sister spilled the beans.
  - Hence, option (a) is correct.
15. (c)  
**Key Concept:** Idioms and Phrases  
**Explanation:**
- "To sail in the same boat" refers to experiencing the same situation or problem as another person.
  - For example:- Azaad and her wife both were sailing in the same boat during covid because they both lost their job during that time.
  - Hence, option (c) is the correct answer.
16. (b)  
**Key Concept:** Vocabulary  
**Explanation:**  
 Refute: to prove that something is wrong  
 Refuse: to say or show that you will not do something that somebody has asked you to do.  
 Revoke: to cancel  
 Rebuke : to scold someone  
 Clearly, option (b) is the most appropriate answer.
17. (d)  
**Key Concept:** Vocabulary  
**Explanation:**  
 Acknowledge a message / letter etc = receive +inform  
 Acknowledging a receipt or letter means that you have received that letter and you have informed them as well.  
 Accept : to take willingly something that is offered; to say 'yes' to an offer, invitation, etc.  
 Respond : to reply  
 Admit : to agree, often unwillingly, that something is true.  
 Clearly, option (d) is the most appropriate answer.



18. **(b)**  
**Key Concept:** Noun and Adjectives  
**Explanation:**  
 "Guy" is a noun, so the word placed before it should be an adjective describing it.  
 wisely is incorrect because it is an adverb.  
 Blandiloquent is an adjective which refers to a person who speaks a lot and speaks in an exaggerated way.  
 Mendicant is a noun whose meaning is pauper or beggar.  
 Coward is also a noun which means a person without courage.  
 So, according to the sentence the most suitable option is option (b)  
 Hence, option **(b)** is correct.
19. **(a)**  
**Key Concept:** Vocabulary  
**Explanation:**  
 Portent: a sign or warning of something that is going to happen in the future, especially when it is something unpleasant.  
 Augmentation: the act or process of increasing the amount, value, size, etc. of something.  
 Endorsement: a public statement or action showing that you support somebody / something  
 Auger: a tool for making holes in wood  
 Clearly, option **(a)** is the most appropriate answer.
20. **(b)**  
**Key Concept:** Vocabulary  
**Explanation:**  
 Irrefutable: that cannot be proved wrong and that must therefore be accepted  
 Diabolical: terrible  
 Rational: reasonable  
 Doable: able to be done  
 Clearly, option **(b)** is the most appropriate answer.
21. **(a)**  
**Key Concept:** Vocabulary  
**Explanation:**  
 Instrumental: important in making something happen.  
 Plenary: without any limit; complete  
 Supplementary: additional  
 Cordial : pleasant and friendly  
 Clearly, option **(a)** is the most appropriate answer.
22. **(b)**  
**Key Concept:** Transitive/intransitive verb  
**Explanation:**  
 Lie          lay          lain  
 (of a person or an animal) to be or put yourself in a flat position so that you are not standing or sitting. It is an intransitive verb in this context.  
 Lay          laid          laid  
 to put somebody/something in a particular position, especially when it is done gently or carefully. It is a transitive verb in this context.  
 Ex: He laid a hand on my arm.  
 Still (adjective) - not moving; calm and quiet.  
 Lie is not an action verb in this context, it is a linking verb, because it is followed by an adjective.  
 Linking verbs are intransitive in nature.  
 Clearly, option **(b)** is the most appropriate answer.
23. **(c)**  
**Key Concept:** Non-finite verbs  
**Explanation:**  
 Replace 'of thinking' with 'to think' 'ability' is followed by an infinitive. Hence, the correct option is **(c)**.
24. **(a)**  
**Key Concept:** Phrases  
**Explanation:**  
 Replace 'according to me' with 'in my opinion'  
 The phrase 'according to me' is used when we get information from other sources apart from the person himself.  
 Hence, the correct option is **(a)**.
25. **(c)**  
**Key Concept:** Noun  
**Explanation:**  
 Replace 'a good advice' with 'good advice'  
 Advice is an uncountable noun, hence remove the article 'a'.  
 Hence, the correct option is **(c)**.
26. **(c)**  
**Key Concept:** Verb  
**Explanation:**  
 Replace 'affect' with 'effect'  
 Affect - verb  
 Effect - noun  
 We need a noun here because of the possessive adjective 'their'  
 Hence, the correct option is **(c)**.
27. **(b)**  
**Key Concept:** Non-finite verb  
**Explanation:**  
 Replace 'paying' with 'to pay'  
 The verb 'afford' is followed by an infinitive.  
 Hence, the correct option is **(b)**.

28. (a)  
**Key Concept:** Adverb  
**Explanation:**  
 Replace 'I have always' with 'I always have'  
 Always - Adverb of frequency  
 The adverb 'always' is used before the main verb.  
 Hence, the correct option is (a).
29. (a)  
**Key Concept:** Verb  
**Explanation:**  
 Replace 'annoyed' with 'was annoyed'  
 'annoyed' is an adjective so it should be preceded by the linking verb 'was'.  
 Hence, the correct option is (a).
30. (c)  
**Key Concept:** Preposition  
**Explanation:**  
 Use 'on TV'  
 The preposition 'on' is used with the noun 'TV'.  
 Hence, the correct option is (c).
31. (c)  
**Key Concept:** Adjective  
**Explanation:**  
 Replace 'thoroughly' with 'thorough'  
 Thoroughly >> adverb  
 Thorough - adjective  
 'Cleaning' is a noun. Noun and pronouns are modified by adjectives not by adverbs.  
 Hence, the correct option is (c).
32. (b)  
**Key Concept:** Preposition  
**Explanation:**  
 Replace 'in the end' with 'at the end'  
 In the end - finally, eventually. 'In the end' phrase refers to 'time' and it gives a reply of when?  
 At the end - at the last point. 'At the end' refers to 'position' and it gives a reply of where?  
 Where should we put a full stop? We have to answer the reply of 'where', so use 'at the end'.  
 Hence, the correct option is (b).
33. (a)  
**Key Concept:** Noun  
**Explanation:**  
 Replace 'attenders' with 'attendant'  
 Attender - a person who goes to a place or an event, often on a regular basis.  
 Ex: She's a regular attender at evening classes.  
 Attendant - a person whose job is to serve or help people in a public place.  
 Hence, the correct option is (a).
34. (b)  
**Key Concept:** Verb  
**Explanation:**  
 Replace 'Had you joined' with 'did you join'  
 Past perfect - past of past  
 'Past perfect' tense shows relative completion.  
 The past perfect tense is used to show that an action took place once or many times before another point in the past. 'Back' is an informal form of 'ago' and 'ago' is only used in past simple tense.  
 Ex: I had reached the station before the train left.  
 In the given sentence there is no other action with which we can relate, so use past simple tense.  
 Hence, the correct option is (b).
35. (b)  
**Key Concept:** Tense  
**Explanation:**  
 Replace 'eliminate' with 'eliminated'  
 It is time/ it is high time/ it is about time/ it is opportune time etc there are some phrases which are followed by 2nd.  
 Hence, the correct option is (b).
36. (c)  
**Key Concept:** Reading comprehension  
**Explanation:**  
 A miserly man of forty does not go to the theater because he persuades himself that he is very poor.  
 Hence, option (c) i.e., 'he persuades himself that he is very poor' is the correct option.
37. (b)  
**Key Concept:** Reading comprehension  
**Explanation:**  
 "There are eccentric people who enjoy saving money for no other reason than the pleasure of saving money." From these lines of the passage, we can conclude that option (b) is correct.  
 Hence option (b) i.e 'saving is a passion with them' is the correct option.
38. (d)  
**Key Concept:** Reading comprehension  
**Explanation:**  
 If a money-box is given to a child, it should be accompanied by a "box of tools".  
 Hence option (d) i.e., 'A box of tools to open it' is the correct option.
39. (a)  
**Key Concept:** Reading comprehension  
**Explanation:**  
 The writer purchased a ticket to win a prize.

Answer to this question can be inferred from these lines of the passage 'Don't ask me how a road engine came to be included among the prizes'  
Hence option (a) i.e., 'to win a prize' is the correct option.

40. (b)  
**Key Concept:** Reading comprehension  
**Explanation:**  
They' in the paragraph stands for the organizers of the fete.  
The Answer to this question can be inferred from these lines of the passage. 'One evening they drew ticket number 1005, and I happened to own the other half of the ticket.'  
Hence option (b) i.e., 'the organizers of the fete' is the correct option.
41. (b)  
**Key Concept:** Reading comprehension  
**Explanation:**  
The writer was stunned because he was at a loss as to what to do with the prize. Writer has no idea about the prize he got, that's why he looked stunned.  
Hence option (b) i.e., 'he was at a loss as to what to do with the prize' is the correct option.
42. (c)  
**Key Concept:** Ordering of Words  
**Explanation:**  
Option (c) 'Q-R-S-P' is the right answer.
43. (c)  
The correct form of verb should be – 'likes'.
44. (c)  
**Key Concept:** Ordering of Words  
**Explanation:**  
Option (c) 'Q-R-S-P' is the right answer.
45. (d)  
**Key Concept:** Ordering of Words  
**Explanation:**  
Option (d) 'Q-R-S-P' is the right answer.
46. (d)  
**Key Concept:** Ordering of Words  
**Explanation:**  
Option (d) 'P-S-R-Q' is the right answer.
47. (d)  
**Key Concept:** Ordering of Words  
**Explanation:**  
Option (d) 'P-R-Q-S' is the right answer.

48. (a)  
**Key Concept:** Synonyms  
**Explanation:**  
The meaning of the given word is to get information or reaction from someone with great difficulty. The synonym of the word Elicit is evoked or brought out. This context shows that the policemen failed to reveal the truth by questioning the criminal.  
Option (b): Wrest means struggle.  
Option (c): Obtain means acquire.  
Option (d): Exhort means persuade.  
Clearly 'evoke' is the correct meaning of the given word.  
Hence, the correct option is (a), i.e., 'Evoke.'
49. (b)  
**Key Concept:** Synonyms  
**Explanation:**  
The word 'lucrative' is an adjective which means producing a sizable profit. And the given sentence connotes that teaching in universities can earn someone a lot of money.  
Option (a): Risky means dangerous. Option (c): Honourable means respectable.  
Option (d): Undignified means indecorous or inelegant.  
Clearly 'profitable' is the correct meaning of the given word.  
Hence, the correct option is (b), i.e., 'Lucrative.'
50. (c)  
**Key Concept:** Antonym  
**Explanation:**  
The word 'Extravagant' is an adjective which means wasteful or spending more than is affordable. This context shows that a person has a habit of spending more than is affordable.  
Option (a): Sensible means wise. Option (b): Careful means cautious.  
Option (c): Balanced means even or equitable.  
Clearly, 'economical' is the correct opposite meaning of the given word.  
Hence, the correct option is (c), i.e., 'Economical.'
51. (d) **India will not participate in the second worldwar**  
**Explanation:**  
**Cripps Proposal came to India due to gain support of India for second world war.**  
**Cripps Proposal** has following features:
  - It led to creation of an Indian empire.
  - This **dominion** would be free to join or leave the British Commonwealth as it saw fit.

- Also, it would be free to join international organisations.
- A **Constituent Assembly** would be established to draught the nation's new constitution.
- Members of this Assembly would be chosen by the provincial assemblies and princes, respectively.
- Every **province** that refused to join the Indian dominion was free to create its own union and **write its own constitution**.
- Negotiations between the Constituent Assembly and the British administration would protect **minorities' rights** and the transfer of power.
- The British and the authorities of the existing constitution would control India's defence in the **interim** until the new constitution came into effect.

Hence the correct answer is **option d**.

52. (c) **Double Rule/Co Rule**

**Explanation:**

- Dyarchy was introduced by the **Government of India Act 1919**
- The term "**dyarchy**," which is derived from the Greek word di arche, which meaning "**double rule**," was used to describe this dual system of government.
- The **provincial subjects** were further separated into two groups: **transferred and reserved**.
- The **Governor** was to oversee the **transferred subjects** with the assistance of Ministers in the legislative council's crosshairs.
- The **Governor** and his **executive council** were in charge of the legislative council.

Hence the correct answer is **option c**

53. (d) **Ashvagosha**

**Explanation:**

Ashvaghosha popularise a new form of poetry, Kavya

His important works are mentioned below:

- Mahayana-shraddhotpada-shastra ("The Awakening of Faith in the Mahayana"),
- the Buddhacarita ("The Life of Buddha"),
- the Mahalankara ("Book of Glory")

Hence the correct answer is **option d**.

54. (d) **Buddhism**

**Explanation:**

**Mahavamsa and Dipavamsa:**

- The name Dipavamsa means "**Chronicle of the Isle**." It is Sri Lanka's first historical document.

- It is thought to have been put together somewhere in the third or fourth century BC in Anuradhapura, Sri Lanka, during the reign of King Dhatusena, the country's first Mauryan king.
- The arrival of the Buddha's teachings and preachers in Sri Lanka is another topic covered.
- It mentions Buddha's travels to Dighavapi and Kelaniya in Sri Lanka.
- The most significant Pali epic poem is the Mahavamsa. Mahavamsa is Sanskrit for "Big Chronicle."
- It is a historical poem written in Pali that discusses the Sri Lankan Monarchs.

Hence the correct answer is **option d**.

55. (b) **W. C. Banerjee****Explanation:**

First session of Indian National Congress in 1885 was presided by W. C. Banerjee.

Hence the correct answer is **option b**.

56. (b) **Sree Narayan Guru****Explanation:**

- The **Gandhian or nationalist strategy** used by the temple entry campaign to combat caste discrimination.
- Lower caste individuals were prohibited from entering the grounds of temples in Kerala during the 20th century.
- Sree Narayana Guru was the leader of a social reform movement that demanded that lower caste individuals be permitted admission into state-run temples.

Hence the correct answer is **option b**.

57. (d) **All of the above****Explanation:**

Demands of **Home Rule League** is mentioned below:

- to make India a self-governing nation.
- to encourage political discourse and National education in order to spark self-government agitation.
- to inspire Indians with the confidence to speak up against government repression.
- to ask the British government to give Indians more political representation.
- to rekindle political action in India while upholding the Congress Party's beliefs.
- Swadeshi

Hence the correct answer is **option d**.

58. (c) Amir Khusrau

**Explanation:**

- Amir Khusrau was the author of **Tarikh-i-alai or Khazainu-i-Futuh**.
- It contains information about **the first few years of Alauddin Khilji**.
- He styled the Alauddin Khilji as **Muhammad Shah Sultan**.
- The work is in the form of **prose**.
- The work contains many **Hindi words like mar-a-mar, Kath-Ghar, etc.**
- The work contains information from **the accession of Alauddin Khilji to his invasion of Malabar**.
- Amir Khusrau was an **Indo-Persian Sufi singer**.
- He is known for the creation of **Hindustani Music**.
- **Ziauddin Barani** was a historian and contemporary of **Muhammad Bin Tughlaq and Firoz Shah Tughlaq**.
- **Shams Siraj Afif** was a historian who wrote the book **Tarikh-e-Firozshahi**.
- **Yahiya Bin Ahmed** was an **Indian Historian of Medieval India**.
- He was the author of **Tarikh-e-Mubarakshahi**

The correct answer is **Amir Khusrau**.

59. (d) Government of India Act 1909

**Explanation:**

Government of India Act of 1909 is also known as legalised communalism.

It introduced the **separate electorate** for Muslim.

Hence the correct answer is **option d**.

60. (b) Certificate of Registration

**Question Demand:**

Overview of **the Passive Resistance Association (1906)**.

**Key Concept:**

**The Passive Resistance Campaign was led by Mahatma Gandhi in 1906 in South Africa.** It was one of the finest and greatest movements which left a long-lasting impact on the world's history. The first protest was against **the Asiatic Registration Bill, 1906** which restricts the activities of Indians in the foreign land.

**Explanation:**

- **Poll tax** were the fixed fees which every voter has to pay so that they can cast votes. It was **started in the United States** long before the Civil War. The main reason behind implementing this tax was to prevent Black Americans from voting. However, it was **declared illegal in 1966**.

- **Legislations are the set of laws** that are made by the government and one needs to proceed as per the law. In South Africa, Indians and their business activities were restricted and confined to a particular area.
- **In South Africa, the National Law Amendment Bill** was passed which restricted the Indians from voting and their rights were restricted. The Indians must have the minimum property of **fifty pounds** to be eligible for the voting rights. This was the **Legislation to disenfranchise the Indians**.
- **In 1906, the government of South Africa** passed a law that Indians dwelling there must carry a Certificate of Registration with them at all times. Against these atrocities by the government, Gandhi ji started a Satyagraha, a non-violent or passive protest and fight for the rights of the Indian citizen. This act was also known as **the Black Act**.

Hence, the correct answer is **option b** i.e. **Certificate of Registration**.

61. (d) Mahavir Explanation:

The correct answer is **Mahavir**.

- **Mahavir** was the contemporary of **Gautam Buddha**.
- **Both were active in the 6th century in the Indian subcontinent**.
- Gautam Buddha was born in **564 BCE in Lumbini, Nepal**.
- Mahavir was born in the early **6th century, 599 BCE**, in the province of **Vaishali in a royal Kshatriya clan**.
- **Kanishka** was an emperor of **the Kushan Dynasty**.
- He was born in **78 AD in Peshavar, Punjab**.
- **Kautilya** was an Indian polymath who was apolitical advisor, teacher, author, strategist, etc.
- Kautilya was born in **375 BCE in Taxila, Pakistan**.
- Kautilya was also known as **IndianMachiavelli**.
- **Nagarjuna** was born in **150 CE**.
- He was the founder of the **Madhyamaka School of Buddhism**.

62. (c) 1, 2 and 4

**Key Concept: Rowlatt Act****Explanation:**

- Gandhiji launched the **Rowlatt Satyagraha** in 1919 because of the **anarchical and Revolutionary Crimes Act**, popularly known as Rowlatt Act.



- It allowed the arrest of Indians without warrant on the mere suspicion of treason.
- During the Great War of 1914-18, the British also instituted press censorship. so statement 1 and 2 is correct.
- Rowlatt Act was not restricted to **the Bombay and Madras** Presidency. so statement 3 is incorrect.
- the situation reached a bloody climax in **Amritsar** in April 1919 when a British Brigadier ordered his troops to open fire on a nationalist meeting.
- More than four hundred people were killed in what is known as the **Jallianwala Bagh massacre**. so statement 4 is correct.

Hence, the correct answer is **option c**  
i.e. 1, 2 and 4

63. **(b) All India Services**

**Explanation:**

Federalism is a form of government in which authority is shared between the national government and its constituent states and provinces. Feature of Indian Federalism are mentioned below:

- Dual Government
- Division of powers between various levels
- Rigidity of constitution
- Independence judiciary
- Dual citizenship
- Bicameralism

Hence the correct answer is **option b**.

64. **(a) Center-State relation**

**Explanation:**

The UPA Government established a three-person commission in April 2007 under the leadership of former Indian Chief Justice M.M. Punchhi

The objective of this commission was to give recommendation to improve the Centre-State Relation.

Hence the correct answer is **option a**

65. **(d) Election Commission**

**Explanation:**

- Election Commission is responsible to maintain the electoral democracy in India.
- Election Commission is mentioned in Article 324 of our constitution.
- It is responsible for superintendence and conductance of election.

Hence the correct answer is **option d**.

66. **(d) Autonomous District Council**

**Explanation:**

73rd Constitutional Amendment has created three bodies:

- State Election Commission
- State Finance Commission
- District Planning Committee

The Scheduled and Tribal Areas are covered under Article 244.

The Sixth Schedule under Article 244 (2) of the Constitution relates to those areas in the States of Assam, Meghalaya, Tripura and Mizoram

These are declared as “tribal areas” and provides for District or Regional Autonomous Councils for such areas.

Hence the correct answer is **option d**.

67. **(c) B. N. Rao**

**Explanation:**

**B. N. Rau** was not a member of constituent assembly but **constitutional advisor** to constituent assembly.

He was a civil servant who drafted the constitution of Burma

Hence the correct answer is **option c**.

68. **(a) Certiorari**

**Explanation:**

**Writ of Certiorari** is issued by the Supreme Court against the delayed implementation of any policy legislation by executive.

Hence the correct answer is **option a**.

69. **(c) Prime Minister**

**Explanation:**

Dr. Bhimrao Ambedkar stated, ‘*if any functionary under our Indian Constitution is to be compared with the United States President, he is the Prime Minister and not the President of the Union*’.

Hence the correct answer is **option C**

70. **(a) Right to Vote**

**Explanation:**

**Fundamental Right** mentioned in our constitution is:

- Right to equality (Article 14–18)
- Right to freedom (Article 19–22)
- Right against exploitation (Article 23–24)
- Right to freedom of religion (Article 25–28)
- Cultural and educational rights (Article 29–30)
- Right to constitutional remedies (Article 32)

Hence the correct answer is **option a**.



71. **(b) The Attorney General**

**Key Concept:**

The Indian Parliament includes the President, the Rajya Sabha and the Lok Sabha.

**Explanation:**

- The President appoints the Comptroller and Auditor General. The CAG is responsible for the external and internal audits of the expenses of the National and State government.
- The Chief Election Commissioner of India have the fixed tenure of 6 years. The Election Commission of India is an autonomous body responsible for the free and fair conduct of election in the Centre and State level. He was elected by the President.
- The Attorney General of India has the right to speak and take part in the proceedings of any of the Houses of the Parliament and be a member of the Parliamentary committee. He is not eligible to vote.

Hence, the correct answer is option b i.e. The Attorney General.

**Additional Information:**

- The president elects the Attorney General of India.
- The Provision for the Attorney General of India is in Article 76 and 78.

72. **(c) Kesavananda Bharati case**

**Key Concept:**

Basic Structure of the Constitution

**Explanation:**

In the Kesavananda Bharati Case, Supreme Court laid down a new doctrine of the 'basic structure' (or 'basic features') of the Constitution.

- It ruled that the constituent power of Parliament under Article 368 does not enable it to alter the 'basic structure' of the Constitution.
- This means that the Parliament cannot abridge or take away a Fundamental Right that forms a part of the 'basic structure' of the Constitution.

Hence, the correct answer is option (c).

73. **(a) Olympus Mons**

**Explanation:**

Olympus Mons is the largest volcano in our solar system and is located on Mars. It is approximately 13.6 miles high, which is almost three times the height of Mount Everest, the highest mountain on Earth.

**Conclusion:**

Hence, the correct option is a, which is Olympus Mons

74. **(a) Subduction**

**Explanation:**

At mid-ocean ridges, two plates move apart from each other, creating a gap between them. This gap is filled with magma that cools and solidifies, forming new oceanic crust.

**Conclusion:**

Hence, the correct option is a which is Plate divergence

75. **(c) core**

**Explanation:**

The Earth's magnetic field is generated by the movement of molten iron in the outer core. This layer is located between the mantle and the inner

**Conclusion:**

Hence, the correct option is c which is core.

76. **(c) Mesa Explanation:**

An erosional landform is one that is formed by the erosion of rock or soil. A mesa is an example of an erosional landform that is formed by the erosion of a plateau.

**Conclusion:**

Hence, the correct option is c which is Mesa

77. **(d) Plateau volcano Explanation:**

Shield, composite, and cinder cone volcanoes are all types of volcanoes commonly found on Earth. Plateau volcanoes, on the other hand, are not a recognized type of volcano.

**Conclusion:**

Hence, the correct option is d which is Plateau volcano

78. **(a) Nitrogen Explanation:**

Nitrogen makes up about 78% of the Earth's atmosphere, while oxygen makes up about 21%. Carbon dioxide and argon make up less than 1% each.

**Conclusion:**

Hence, the correct option is a which is Nitrogen

79. **(a) Kuroshio Current Explanation:**

**Kuroshio Current:**

- It is also known as Japan Current and flows from Taiwan to the Bering Strait.
- It is a warm current of the Pacific Ocean.

**Humboldt Current:**

- It is a Cold current of the Pacific Ocean.
- Flows northwards along the western coast of South America and is actually the continuation of west wind drift.

**Conclusion:**

Hence, the correct option is **a** which is Kuroshio Current

80. (a) Aravali

**Explanation:**

- Among the options given, the Aravali mountain range is considered to be one of the oldest fold mountain ranges in the world.
- The Aravali range, which stretches across the states of Rajasthan, Haryana, and Delhi in India, is estimated to be over 350 million years old. It is believed to have formed during the Proterozoic Eon, through a series of tectonic and volcanic activities that resulted in the folding and faulting of the Earth's crust.
- In comparison, the Western Ghats, Eastern Ghats, and Annamalai mountain ranges are relatively younger, with estimates ranging from 60-160 million years ago.
- Therefore, the Aravali mountain range is the oldest fold mountain range among the options given.

**Conclusion:**

Hence, the correct option is **a** which is Aravali

81. (b)

**Explanation:**

1. The Chambal River is a tributary of the Yamuna River, which in turn is a tributary of the Ganges River. The Chambal River originates in the Vindhya Range in Madhya Pradesh and flows for about 960 km before joining the Yamuna River near Bhareh in Uttar Pradesh.
2. The Chambal River is known for its clear waters and pristine surroundings, and it supports a diverse ecosystem of flora and fauna.
3. It is also a major source of water for irrigation and hydroelectric power generation in the region.
4. The Chambal River basin is home to a number of wildlife sanctuaries and protected areas, including the National Chambal Sanctuary, which is a haven for critically endangered species like the gharial, red-crowned roof turtle, and river dolphin.

**Conclusion:**

Hence, the correct option is **(b)**, Which is Yamuna

82. (d)

**Key Concept :** Monsoon**Explanation:**

1. Southwest monsoons come in the Indian subcontinent in form of 2 branches 1st is the bay of Bengal branch and 2nd the Arabian branch.
2. The Bay of Bengal branch enters from the west side of India from Kerala and in this process western ghat blocked most of the moist air which results in less rainfall in Tamil Nadu.
3. On the east side of the western ghat and then the Bay of Bengal branch moves toward central India and gets deflected by Himalayas Mountain Toward the Pakistan region.
4. That is why Tamil Nadu and Jammu & Kashmir receive less rainfall from Southwest monsoons

**Conclusion:**

Hence, the correct option is **(d)**, Which is TamilNadu and Jammu & Kashmir

83. (c)

**Key Concept :** Census of India**Explanation:**

1. In the given option Mizoram (94.4%) has the largest percentage of Scheduled Tribes population to its total population.
2. While according to a census of 2011 Lakshadweep(94.8%) is the highest among all the UT and states that have the largest. Percentage of Scheduled Tribes population to its total population
3. Madhya Pradesh is the one which has the highest percentage of STs population in the country.

**Conclusion:**

Hence, the correct option is **(c)**, Which is Mizoram

84. (a)

**Key Concept:** latitude and longitude**Explanation:**

1. Earth has 2 motions 1) Rotation on its Axis 2) Revolution around the sun
2. Earth completes its one revolution in  $365\frac{1}{4}$  days Which is one year
3. Due to this Revolution, there are 2 positions where daytime and nighttime are equal and that is called Equinox. Which Are vernal equinox (21 March) and Autumnal Equinox (21 September)

4. And there is 1 time in the year when the day is longer than the night in the northern hemisphere is called Summer Equinox
5. And there is 1 time in the year when the Night is longer than a Day in the northern hemisphere is called Winter Equinox
6. Statement 3 is Wrong Because Equinox is time where day and night time is equal

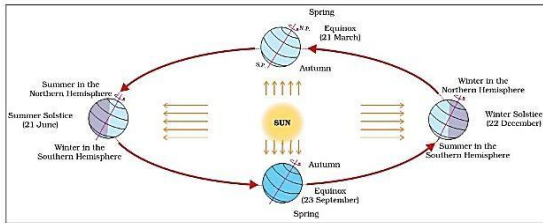


Figure 3.3 : Revolution of the Earth and Seasons

**Conclusion:**

Hence, the correct option is (a),  
Which is 1 and 2 only

85. (a)

**Explanation:**

Antioxidants are mostly found in the plant's food; they are natural molecules that help neutralise harmful free radicals in our bodies. Free radicals are potentially harmful substances resulting from metabolism and the environment when I need oxidative stress, which contribute to heart disease and many diseases. Antioxidant rich fruits and vegetables will strengthen our ability to fight infection and disease. They also activate the enzyme necessary for a vitamin synthesis in the body and help prevent a deficiency.

Hence, the correct option is (a).

86. (b)

**Explanation:**

Golgi bodies play important roles in formation of lysosomes.

It is mainly present in eukaryotic cell except mammalian RBCs. They are abundantly found in the secretory cells.

Carbohydrates link with the protein to form the glycoprotein in Golgi bodies. It was discovered by Camillo Golgi in 1898 and he got nobel prize for this discovery.

Hence, the correct option is (b).

87. (b)

**Explanation:**

**Apical Dominance**

It is the process in which the lateral bud's growth retarded under the influence of Auxin hormones, this process is called as apical Dominance.

Hence, the correct option is (b).

88. (c) **Explanation:**

- Communicable disease are those disease which transmits from disease to healthy person.
  - It is caused by bacteria, viruses, fungi and protozoans.
  - It can be spread by means of air droplets, water food insect and physical contact etc.
  - Eg- Tuberculosis, Malaria, Diarrhea
  - Scurvy are Non-Communicable disease which is caused by the deficiency of vitamin -C
- Hence, the correct option is (c), i.e., Scurvy

89. (b) **Explanation:**

**Small Intestine -**

- It is the longest part (about 2 ft or 6 meter) of alimentary canal.
- It is divided into three parts, i.e. duodenum (situated nearest to the stomach), jejunum and ileum.
- Duodenum receives the bile-pancreatic duct.
- Pancreatic duct have few enzymes, which acton carbohydrates, fats and proteins.
- Ileum absorbs the fatty acids. Maximum foodabsorption takes place in the ileum only.
- Complete digestion of proteins, fats and carbohydrates occurs in the small intestine.
- Inner mucosa of the small intestine have finger-like projections called villi.
- Villi and microvilli increase the surface area of digestion and absorption of food.

Hence, the correct option is (b).

90. (b) **Explanation:**

**Pollination**

The process of transfer of pollen grains from the anther to

the stigma is called pollination. Pollination by wind

- **Anemophily**
- Pollination by insect — **Entomophily**
- Pollination by bats — **Chiropterophily**
- Pollination by ants — **Myrmecophily**
- Pollination by water — **Hydrophily**
- Pollination by birds — **Ornithophily**
- Pollination by snails — **Malacophily**

Hence, the correct option is (b),

i.e., A-3, B-1, C-2, D-5

91. (b) **Explanation:**

- Pteridophytes are non-seeded Vascular plants.

- They are the first vascular plants.
- They are used for medical purposes, as ornamental and soil binders.
- If we talk about evolutionary relationship they are first terrestrial plants to possess vascular tissue.
- They are not completely successful land plants because the main thing is that they need water Fertilization.

Hence, the correct option is **(b)**,  
i.e., Non-Seeded Vascular plant

92. **(b)**

**Explanation:**

- Movement of molecules or atoms or ions from higher concentrations to the lower concentrations is known as Diffusion.
- Diffusion is a slow process which accounts for the short distance of transport.
- Diffusion Doesn't depend upon the living system.
- Exchange of gasses like Carbon Dioxide, and Oxygen between plants and atmosphere occurs through the diffusion
- It is the only gaseous movement in the plants.

Hence, the correct option is **(b)**.

93. **(b)**

**Explanation:**

- Fertilizers are supplementary materials applied to crops in order to boost productivity.
- The letters NPK stand for nitrogen, phosphorus, and potassium, the three main nutrients that plants require to survive and grow.
- Potassium helps in the rapid growth and development of strong stems in plants.
- Nitrogen helps plant development and the production of the green color in leaves.
- There are six essential nutrients
- Nitrogen, Phosphorus, Potassium, Magnesium, sulfur and calcium for growth of plants.
- Critical growth hormones for plant development include auxin and cytokinin.
- They are naturally present in the plant throughout the season in varying amounts.

Hence, the correct option is **(b)**.

94. **(b)**

**Explanation:**

- Any materials in bacteria that carry genetic information and pass it from one generation to another generation are known as genetic material

- Cytoplasm is a semi liquid jelly-like element, which is composed of salt and water, present inside the membrane of the cells.
- The other cell organelles such as: mitochondria, ribosomes, endoplasmic reticulum etc., are suspended in it and cytoplasm provides shape to the cell.
- The genetic material of bacteria is found in the form of nucleotides, which are present in the cytoplasm.

Hence, the correct option is **(b)**.

95. **(b)**

**Chemical Change-**

- It results from a chemical reaction, as the atom rearranges to form a new chemical bond.
- During Chemical change new substances are formed.
- It is an irreversible process.
- Reactants and products are chemically different from one another.

**Explanation:**

The shredding of paper is a physical change because the composition of the paper doesn't change, only appearance of the paper changed. During a physical change, neither the chemical composition nor chemical nature of the substance changes.

Hence, the correct option is **(b)**.

96. **(b) Explanation:**

- Atoms and ions that share the same number of electrons are said to be isoelectronic species
- Cations with a greater charge are smaller in size for isoelectronic species.
- $Mg > Mg^+ > Mg^{2+}$

Hence, the Correct option is **(b)**, i.e.,  $C > B > A$

97. **(b) Explanation:**

1 - chloro-2, 2-dimethylpropane

98. **(d) Explanation:**

When non-metals combine with oxygen it leads to formation of both acidic and neutral types of ore. Eg-  $N_2O_3$  – acidic oxide, CO neutral oxide  
Hence, the correct option is **(d)**.

99. (b)  
**Explanation:**
- Transfer of electrons on the electrode in an electrolytic cell is Anode (positive) into Cathode(negative).
  - Cathode in to anode
  - Chemical cell
  - In the electrolyte cell electrical energy turns into chemical energy.
- Hence, the Correct option is (b).
100. (b)  
**Explanation:**  
**Saponification**  
 Saponification is simply the process of making soap Potassium are sodium salt of long chain fatty acid during saponification, which ester react with inorganic base to produce alcohol and soap. Detergent dissolves faster than soap in water . Hence, the correct option is (b).
101. (c)  
**Explanation:**  
**Diamond**
- Diamond is purest form of carbon
  - It is bad conductor of heat and electricity
  - Due to lattice vibration it has the highest thermal conductivity among all known materials.
  - The hybridization of carbon in diamond is  $sp^3$ .
- Graphite**
- It is an important allotrop of carbon which is more valued distributed in nature than diamond.
  - It is also called black lead.
  - It is softer than diamond.
  - It is good conductor of heat and electricity
  - Two dimension layer structure having regular hexagonal sheet.
102. (d)  
**Explanation:**  
**Corrosion**
- It is a process of oxidative deterioration of metal as a result of its reaction with the air and moisture present in the environment
  - Corrosion of iron is called rusting and forms hydrated iron (III)oxide
  - Rusting of iron can be prevented by painting, oiling, greasing, galvanizing and chrome plating.
- Hence, the correct option is (d).
103. (a)  
**Explanation:**  
 HF molecule associate due to hydrogen bonding
104. (a)  
**Explanation:**  
 Ionisation Potential  
 Ionization potential is the minimum amount of energy required to remove an electron from the outermost orbit of an isolated gaseous atom. Ionization potential measures the tendency of cation.
- Second ionization energy is not necessary always more than the first
  - Ionisation potential increases from left to right due to increased effective nuclear charge while it decreases from top to bottom.
- Hence, the correct option is (a).
105. (b)  
**Key concept Carbon compounds:**  
 Carbon compounds are the chemical substances containing carbon  
**Explanation:**
- Hexane is a type of Alkane, which burns to give a non sooty blue flame
  - The **unsaturated hydrocarbons** for example alkenes and alkynes are **aromatic** in nature
  - They don't burn completely (partially burnt carbon particles) and give a **yellow sooty flame**
- Hence, the correct answer is option (b). Hexane
106. (c) **Explanation:**
- Glass is a hard, brittle, non-crystalline and transparent material.
  - It is an amorphous solid.
  - It is transparent and has various shapes and colours.
  - Glass is made up of limestone, soda ash, sand and silica.
  - It has ability to refract, reflect and transmit light.
  - The glasses are used in lenses, mirrors, prisms, packaging material, tableware, housings etc.
- Hence, the correct option is (c).
- Additional Information:**  
**Colloids-**  
 Colloids are nearly homogenous combinations of two or more things in proportion.  
**Crystalline Solids-**



They have well-defined 3d patterns which are repeated.

- The focal length and diameter of eyepieces are larger than the objective.
- Final image is magnified, virtual, and inverted.
- Hence, the Correct option is **(c)**.

**107. (c) Explanation:**

- **Force** is the interaction that, when applied to someone, attempts to change their body position.
- The SI unit of force is **Newton (N)**, which denotes it as F.
- Acceleration of the body refers to the rate of change in velocity.
- Acceleration is a vector quantity.  
Force (F) = m × a
- where a is the body's acceleration and m is the body's mass.
- If we have two vectors  $\vec{A}$  and  $\vec{B}$  which are at angle  $\theta$  to each other then the magnitude of the Resultant vector (R) is given by
- $R = \sqrt{A^2 + B^2 + 2AB\cos\Theta}$
- where A is the magnitude of vector  $\vec{A}$  and B is the magnitude of the vector  $\vec{B}$  and  $\Theta$  is the angle between two vectors.

**108. (a)**

**Explanation:**

As in the given graph with change in time position is not changing that means body is at rest Hence, the correct option is **(a)**.

**109. (a)**

**Explanation:**

- In the case of upwards motion at an acceleration of 'a' the tension is
- $T = W + ma$ , where W is the body's weight and m denotes body mass. The tension is maximum in this case.
- In the case of downwards motion at an acceleration of 'a' the  $T = W - ma$ .
- If the body is just suspended (not moving), then the tension is  $T = W$ .
- If the body rises at a constant rate, then the tension is  $T = W$ .

Hence, the Correct option is **(a)**. i.e.,  
Upward motion

**110. (c) Explanation:**

- compound microscope consists of two converging lenses called objective and eyepieces.

**111. (c) Explanation:**

Rate of change of momentum and external force

**112. (c) Explanation:**

A thermostat is a component of a regulating device that measures the temperature of a physical system and takes action to keep the system's temperature close to a preset point or we can say constant point Hence, the correct option is **(c)**.

**113. (c) Explanation:**

5 mH

**114. (b) Explanation:**

- Given that: wavelength of lights A and B are  $\lambda$
- and  $2\lambda$ .
- By using the relation between intensity and wavelength

$$\text{Intensity of scattered light} \propto \frac{1}{\lambda^4}$$

$$\Rightarrow \frac{\text{Intensity of A}}{\text{Intensity of B}} = \frac{\lambda_B^4}{\lambda_A^4} = \frac{(2\lambda)^4}{(\lambda)^4} = \frac{16}{1} = 16$$

So, **Intensity of A = 16 Intensity of B**  
Hence, the Correct option is **(b)**.

**115. (c) Explanation:**

We know that-

Absolute refractive index

$$(\mu) = \frac{\text{Speed of light in air}}{\text{Speed of light in medium}}$$

Basically 1.5 given refractive index is absolute refractive index-

$$1.5 = \frac{3 \times 10^8}{v}$$

$$v = \frac{3 \times 10^8}{1.5} = 2 \times 10^8 \text{ m/s}$$

Hence, the correct option is **(c)**.

**116. (c) Explanation:**

Twinkling of Star is due to the atmospheric refraction. Velocity of the light changes when it passes from one medium to another medium due to



change in the refractive index. when light from stars enters into Earth's atmosphere, it suffers multiple and continuous refraction as a result of which the apparent position of stars changes continuously which seems to be twinkling. Hence, the correct option is (c).

117. (d)

**Explanation:**

We know that

$$\text{Magnification (m)} = \frac{v}{u}$$

$$\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$$

$$\frac{1}{f} - \frac{1}{u} = \frac{1}{v}$$

$$\therefore \frac{1}{v} = \frac{u - f}{uf}$$

$$v = \frac{uf}{u - f}$$

$$m = -\frac{v}{u}$$

Putting the value, we get:

$$m = \frac{\frac{uf}{u - f}}{u} = \frac{f}{u - f}$$

$$m = \frac{f}{u - f}$$

Hence, the correct option is (d).

118. (b)

**Explanation:**

- Given that: Resistance (R) = 10Ω and current (I) = 5A

- By using P = I<sup>2</sup> R where, P is power.  
⇒ P = (5A)<sup>2</sup> × 10Ω = 250 W.

- Power in the circuit is 250W.

Hence, the Correct option is (b). i.e., 250Ω

119. (b)

**Explanation:**

- Given that: Resistance = 5Ω, Voltage = 12V

- By using ohm's law, we have V = IR

- Where V is the voltage, I is current,

$$R \text{ is resistance. } \Rightarrow I = \frac{V}{R}$$

$$= \frac{12V}{5\Omega} = 2.4A$$

- The current flowing through the circuit is 2.4 Ampere.

Hence, the Correct option is (b). i.e., 2.4 Amp

120. (c)

**Explanation:**

- Given that: no. of turns (n) = 20 turns/cm  
magnetic field (B) = 20mT

- The magnetic field inside the solenoid is

$$B = \frac{\mu_0 n i}{4\pi \times 10^{-7} \frac{T \cdot m}{A}} \times (20 \times 10^2 \text{ m}^1) i$$

$$\Rightarrow i = 9.0 \text{ A}$$

Hence, the correct option is (c), i.e., 9A

121. (b)

**Explanation:**

- Solids are usually heated by the process of conduction.

- Convection is how gases and liquids get heated.

- The process of radiation requires no medium.

Hence, the Correct option is (b)

122. (c) **Explanation:**

- Magnetic field is the term for the area surrounding a magnet where its impact can be felt.

- The magnetic lines create this field.

- If the charged particle is traveling perpendicular, antiparallel, or parallel to the magnetic field then there would be no force on it as F = qv Bsinθ as a result, the particle will continue to move in the same direction.

- F is the net forcing on charge, qv Bsinθ is the force acting on the charge due to the magnetic field.

- The magnetic force is always perpendicular to both the magnetic field and the velocity.

Hence, the correct option is (c)

123. (c) **Explanation:**

- The angle of incidence is the angle formed between the incident ray and the normal at the point of incidence..

- The angle of refraction -the angle formed at the point of incidence by the refracted beam and the normal.

- Refractive index is a value calculated by ratio of the speed of light in a vacuum by the speed in a second medium with higher density.

- Snell's law and the information provided show

$$n_1 \sin i = n_2 \sin r$$

$$\therefore \frac{\sin i}{\sin r} = \frac{n_2}{n_1}$$

- $r$  = is angle of refraction and the  $i$  is angle of incidence.

Hence, the correct option is **(c)**

124. **(a)**

**Explanation:**

- Wavelength is the distance between identical places in
- two consecutive waves of a waveform signal that has been transmitted along a wire or in space.

$$\lambda = \frac{v}{f}$$

- Frequency is the quantity of waves that pass a specific location in a predetermined amount of time.

**Given:**

$$f = 3 \times 10^5 \text{ Hz}, v = 3000 \times 10 = 300 \frac{\text{m}}{\text{s}}$$

and  $\lambda = ?$

Relation between velocity, frequency and wavelength

$$v = f \times \lambda$$

$$\lambda = \frac{v}{f}$$

$$\therefore \lambda = \frac{3000}{3 \times 10^5}$$

$$= 10^{-2} \text{ m} = 1 \text{ cm}$$

This This wave will have a wavelength of about 1 cm in that medium.

Hence, the correct option is **(a)**

125. **(c) Explanation:**

- The displacement is the distance in a straight line moving in a specific direction.
- Displacement versus time graphs show how the displacement of a moving item changes over time.
- A particle will accelerate at a constant pace if the force exerted on it is constant.
- Hence  $S = ut + \frac{1}{2}at^2$ . Comparing this with parabola equation  $Y = mx$
- When the acceleration is constant, the relationship between displacement and time is quadratic, making the curve a parabola.
- A uniformly moving body's displacement time graph is a straight line.
- A parabolic curve represents the time graph of an object with continuous acceleration.

Hence, the correct option is **(c)**

126. **(c)**

**Explanation:**

Conductivity and resistivity are two materialistic properties of conducting material.

The conductivity is basically the reciprocal of the resistivity.

$$\text{Conductivity} = \frac{1}{\text{Resistivity}}$$

The product of conductivity and resistivity will always equal unity i.e one.

Therefore it always remains constant.

Hence the correct option is **(c)**

127. **(b) Explanation:**

The len's maker formula can be given as,

$$\frac{1}{-} = \frac{1}{-} - \frac{1}{f} \quad v \quad u$$

where,  $f$  is focal length,  $v$  is image distance and  $u$  is object distance.

According to question, it can be written as,

$$\frac{1}{15} = \frac{1}{v} - \frac{1}{-10}$$

$$\frac{1}{15} = \frac{1}{v} + \frac{1}{10}$$

$$v = 15 \quad 10$$

$$v = 30$$

The magnification can be calculated as,

$$\text{Magnification} = - \frac{v}{u}$$

$$\text{Magnification} = - \frac{30}{-10}$$

$$\text{Magnification} = 3$$

The image will be Virtual and magnified in size.

Hence, the correct option is **(b)**

128. **(d) Explanation:**

The theme for International Day for Monuments and Sites (World Heritage Day 2022) is Heritage and Culture.

ICOMOS promotes the day throughout the world, and the year 2022's subject is "Heritage and Climate." One of the defining challenges of our day is climate change, which poses one of the biggest risks to the cultural and natural UNESCO World Heritage monuments and sites

Hence the correct answer is option **(d)**

129. **(a) Explanation:**

Egmont group is related to sharing financial information.

The Egmont Group of Financial Intelligence Units is an international group that promotes collaboration and information exchange among national financial intelligence units (FIUs) in order to look into and stop the financing of terrorism and money laundering.

Hence the correct answer is option (a)

130. (d)

**Explanation:**

The Middle Eastern Quad also goes by the name I2U2.

It is a brand-new alliance created by the US, Israel, the UAE, and India.

The International Forum for Economic Cooperation was given that name.

Hence the correct answer is option (d)

131. (a)

**Explanation:**

Satyabhama portal is related to Ministry of Mines. According to the portal Government of India, provide fund for the research in this field.

Hence the correct answer is option (a)

132. (a)

**Explanation:**

Sharat Kamal Achanta received the Major Dhyan Chand Khel Ratna Award in 2022

It is a lifetime achievement award in the field of sport.

Hence the correct answer is option (a)

133. (d)

**Explanation:**

At the Birmingham 2022 Commonwealth Games, Nikhat Zareen takes home the gold medal.

In the women's light-fly 48kg–50kg boxing finals, she defeated Mac Naul of the Northern Islands by a score of 5-0.

The gold medal won by Nikhat Zareen at the 2022 Commonwealth Games brings India's overall number of medals and golds to 48. Nikhat Zareen once more demonstrates her superiority in the boxing world.

Hence the correct answer is option (d).

134. (d)

**Explanation:**

India got the rank 40th in the Global Innovation Index 2022.

Global Innovation Index is published by WIPO.

Hence the correct answer is option (d)

135. (c)

**Explanation:**

Russia is not a permanent member of G7

The United States, Canada, France, Germany, Italy, Japan, the United Kingdom, and the Group of

Seven make form the worldwide Group of Seven;

Hence the correct answer is option (c)

136. (b)

**Explanation:**

The winner of the French Open 2022 Men's Single Final is Rafael Nadal.

Rafael Nadal won the men's singles tennis championship at the 2022 French Open by defeating Casper Ruud 6-3, 6-3, 6-0 in the championship match.

He won the French Open for the record-extending 14th time, and he won 22 major championships total.

Hence the correct answer is option (b).

137. (a) **Explanation:**

REAIM 2023 is related to Artificial intelligence.

The full form of REAIM is Responsible Use of Artificial intelligence in the Military (REAIM 2023)

The conference was hosted by South Korea.

Hence the correct answer is option (a).

138. (a) **Explanation:**

4. The theme for International Day of Yoga 2022 is "Yoga for humanity".

5. Yoga is universal — it can be practised anywhere, at any time, and by anyone irrespective of age, gender, culture or nationality.

6. Yoga is a powerful tool for individuals, communities and countries to improve both mental and physical health

Hence the correct answer is option (a).

139. (d) **Explanation:**

Tatineni Rama Rao (1938 – 20 April 2022) was an Indian filmmaker.

He directed 75 Hindi and Telugu feature films between 1966 and 2000.

He died on 20th April 2022.

Hence the correct answer is option (d).

- 140. (a)**  
**Explanation:**  
 Both the eSanjeevani AB-HWC and eSanjeevani OPD versions have been ABDM platform integrated.  
 The eSanjeevani telemedicine platform has finally finished integrating with the ABDM, joining the other 40 digital health applications.  
 Hence the correct answer is option **(a)**.
- 141. (b)**  
**Explanation:**  
 Sparsh is a comprehensive system for automating defence pension sanction and payment.  
 Without using a third party intermediary, this web-based system handles pension claims and deposits pension payments into the bank accounts of defence retirees.
- 142. (a)**  
**Explanation:**  
 In Pulai, Kluang, Malaysia, the joint military exercise "Harimau Shakti 2022" between Malaysia and India got underway.  
 The annual training exercise between the armed forces of India and Malaysia will end on December 12th, 2022.  
 The military exercise will take place in Malaysia for the next two weeks.  
 The armies of the two nations will cooperate in military activities.  
 Hence the correct answer is option **(a)**.
- 143. (a)**  
**Explanation:**  
 A UN panel has recommended that the Great Barrier Reef in Australia be designated as a World Heritage Site in Risk.  
 According to the paper, the world's largest coral reef ecosystem has been significantly impacted by ocean warming and climate change.  
 Hence the correct answer is option **(a)**.
- 144. (c) Explanation:**  
 Humpy Koneru was born in Gudivada, Andhra Pradesh on March 31, 1987.  
 She is the current World Rapid Chess Champion and an Indian chess grandmaster.  
 She won the individual bronze at the women's World team Chess Championship 2015 held in Chengdu, China.
- Koneru won three gold medals at the World Youth Chess Championship in 1997, (under -10 girl division), 1998 (under 12 girls) and 2000 (under 14 girls).  
 Hence, the correct option is **(c)** i.e., Chess.
- 145. (d)**  
**Explanation:**  
 Naseem-Al-Bahr is a bilateral naval exercise held since 1993 between the Indian Navy and the Royal Navy of Oman.  
 Muscat is the capital of Oman  
 Currency:- Omani rial  
 Hence, the correct option is **(d)** i.e., Oman
- 146. (c) Explanation:**  
 On June 26 in 1945, representatives from the 50 countries attending the United Nations Conference on International Organization in San Francisco signed the UN Charter.  
 Poland, which was not represented at the time, later signed it and became one of the UN's original 51 members.  
 Hence, the correct option is **(c)** i.e., San Francisco Conference.
- 147. (b) Explanation:**  
**Question Demand:** Infrastructure  
**Key Concept:** Infrastructure  
**Explanations:**  
 1. When the Philippines' Defense Ministry inked a 374 million contract with BrahMos Aerospace Private Limited to supply an undisclosed quantity of missiles, India received its first-ever export order for BrahMos missiles from that country.  
 2. In the midst of hostilities with China over the disputed islands in the South China Sea, the Philippines intends to introduce this missile.  
 3. A number of nations have expressed interest in purchasing the BrahMos missile. For instance, talks with Thailand and Indonesia are far along in the process.  
 Hence, the correct answer will be option **(b)** i.e., Philippines.
- 148. (c) Explanation:**  
**Question Demand:** Culture and civilization.  
**Key Concept:** Culture and civilization.  
**Explanations:**  
 1. Legendary Kathak dancer Pandit Birju Maharaj was regarded as the pinnacle of the Lucknow gharana of Kathak.

2. Different schools or genres of classical Indian dance and music are referred to as gharanas.
3. Each gharana is distinguished by its own distinctive footwork, hand gestures, and body movements.
4. Intricate footwork, the use of abhinaya, and a concentration on layakari and tukras are all characteristics of the Lucknow gharana.
5. Pandit Birju Maharaj was raised by his father and uncles, who were all well-known representatives of the Lucknow gharana, and was born into a family of Kathak dancers.

Hence, the correct answer will be **(c)** i.e., Lucknow.

**149. (c) Explanation:**

- Covaxin is an inactivated pathogen-based vaccine developed by Bharat Biotech in India for the prevention of COVID-19.
- It uses a strain of the SARS-CoV-2 virus that has been inactivated, meaning it cannot cause an infection, to stimulate an immune response in the person receiving the vaccine.
- Covishield is an mRNA vaccine developed by AstraZeneca and the University of Oxford for the prevention of COVID-19.

- It uses a piece of genetic material called messenger RNA (mRNA) that provides instructions for cells to produce a piece of the SARS-CoV-2 virus known as the spike protein.
- Sputnik V is a viral vector-based vaccine for the prevention of COVID-19. It was developed by the Gamaleya National Research Institute of Epidemiology and Microbiology in Russia.
- The vaccine uses a weakened version of a different virus (not the SARS-CoV-2 virus that causes COVID-19) to deliver a piece of genetic material into cells that provide instructions for producing the spike protein of the SARS-CoV-2 virus.

Hence, the Correct option is **(c)** i.e. 1 and 3 only

**150. (b) Explanation:**

The maiden Indian Navy - European Union Naval Force (IN-EUNAVFOR) Exercise (2021) was conducted in Gulf of Aden.

Hence the correct answer is option **(b)**.