

### PART - A

# **SPOTTING ERRORS**

**Directions:** Each item in this section has a sentence with three underlined parts labelled (a),(b) and (c). Read each sentence to find out whether there is any error in any underlined part and indicate your response in 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).

|     | Onesing his labbour was discrete as south the and southing for his sleet.                        |
|-----|--|
| 1.  | Opening his letters, reading them carefully and sending for his clerk,                           |
|     | (a) (b) he dictated answers with them. No error  |
|     | (c) (d)  |
| 2.  | He was my school-friend but becoming a great man,  |
| ۷.  | (a) (b)  |
|     | he has grown proud enough to forget his old friends.  No error                                   |
|     | (c) (d)  |
| 3.  | Rabindranath Tagore, a Nobel laureate and the author of the national anthem,                     |
|     | (a) (b)  |
|     | found Shantiniketan No error.  |
|     | (c) (d)  |
| 4.  | The art of printing was introduced into England during the reign of Edward IV                    |
|     | (a) (b)  |
|     | By William Caxton, a native of Kent No error   |
|     | (c) (d)  |
| 5.  | From thirty years He devoted himself to public affairs without taking a holiday No error         |
|     | (a) (b) (c) (d)  |
| 6.  | If Ramesh will be promoted he will get a higher salary No error                                  |
|     | (a) (b) (c) (d)  |
| 7.  | My brother goes to the coffee five day week No error   |
| _   | (a) (b) (c) (d)  |
| 8.  | If you lend Mohan a pen he will lend it to someone else and never you will get it back           |
|     | (a) (b) (c)  |
|     | No error (d)   |
| 9.  | One of the most widely spread bad habits is the use of tobacco No error                          |
| ٥.  | (a) (b) (c) (d)  |
| 10. | A great part of Arabia is desert No error  |
|     | (a) (b) (c) (d)  |
|     |  |
|     | SYNONYMS   |
|     | Directions: Each item in this section consists of a sentence with an underlined word followed by |
|     | four words or groups of words. Select the option that is nearest in meaning to the underlined    |
|     | word/words and mark your response in your in your answer sheet accordingly.                      |
| 11. | Some people complain when they C. Great suffering  |
|     | encounter a small misfortune in the course D. Moderate sympathies                                |
|     | of their thoroughly happy life. 13. A glance at a beautiful object gives us                      |
|     | A. run into B. run away <u>delight</u>   |
| 12  | C. run down D. run with A. wisdom B. happiness   |
| 12. | This world is full of miseries  C. purity  D. peace  |
|     | A. indifferent love 14. It is terrible for people to die of <u>starvation</u> .                  |
|     | B. perfect happiness A. starch B. staple   |



C. plenty D. hunger To abolish poverty would be to destroy the The university has constituted a grievance soil upon which mankind produces the virtues conductive to higher civilization redressal committee to look into the A. detest B. eradicate matter. C. nurture D. assimilate A. depression B. complaint 19. The Arabs who are not in the cities live in C. abrasion D. gratefulness the desert throughout the year, shifting 16. Rakesh delivered a slanderous speech from one oasis to another. A. Abusive B. praiseworthy A. sandbank B. mound C. moderate D. inspiring C. dune D. spring 17. Suddenly, the sky was darkened by a The various facets of life can be found gigantic bird. reflected in a large city. A. winged B. small A. several B. similar C. tiny D. enormous

#### **ANTONYMS**

**Directions:** Each item in this section consists of a sentence with an underlined word followed by four words. Select the option that is opposite in meaning to the underlined word and mark your response in your answer sheet accordingly

C. valuable

D. singular

| 21. | Ramesh is very dubious character               | 26.          | His life is rather monotonous.                  |  |
|-----|--|--------------|---|--|
|     | A. shady B. suspicious                         | Transmission | A. exciting B. dreary                           |  |
|     | C. trustworthy D. doubtful                     | . \          | C. tedious D. uneventful                        |  |
| 22. | Do not indulge in unmindful activities,        | 27.          | Maebeth is a morally <u>repulsive</u> character |  |
|     | please.  |              | A. abominable B. attractive                     |  |
|     | A. vigilant B. careless                        |              | C. abnoxious D. ugly                            |  |
|     | C. stupid D. fatuous                           | 28.          | The serene beauty of Kashmir had a              |  |
| 23. | He is suffering from a <u>curable</u> disease. | <b>V</b>     | soothing effect on his mind.                    |  |
|     | A. remediable B. treatable                     |              | A. placid B. pleasing                           |  |
|     | C. terminal D. operable                        |              | C. tranquil D. turbulent                        |  |
| 24. | He was born on a very <u>auspicious</u> day.   | 29.          | Life is transient in nature                     |  |
|     | A. propitious B. fortunate                     |              | A. brief B. momentary                           |  |
|     | C. ominous D. opportune                        |              | C. eternal D. short-lived                       |  |
| 25. | He has deeper hostility towards Mohan.         | 30.          | Sohan is a <u>vain</u> person.                  |  |
|     | A. animosity B. belligerence                   |              | A. modest B. arrogant                           |  |
|     | C. malice D. friendship                        |              | C. conceited D. proud                           |  |

### **IDIOMS AND PHRASES**

**Directions:** 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.

- 31. A dark horse
  - A. a black coloured horse
  - B. a person who wins a race or competition although no one expected him to
  - C. a person who keeps secrets
  - D. an ignorant person
- 32. A show-stopper
  - A. someone who stops the show
  - B. someone who organizes the show

- C. a performance that is ectremely good
- D. a fashionable person
- 33. A jack of all trades
  - A. someone who has many skills
  - a confident and not very serious young man
  - C. someone who has hit the jackpot
  - D. a great businessman
- 34. Fight tooth and nail
  - A. to quarrel with someone



- B. to attack someone with a lot of force
- C. to try hard to prevent something from happening
- D. To try hard to achieve somthing
- 35. Fair and square

- A. in an honest way
- B. in a critical way
- C. neither very good nor very bad
- D. in a foolish way

#### ORDERING OF SENTENCES

**Directions:** in this section each item consists of six sentences of a passage. The first and sixth sentences are given in the beginning as SI and S6. The middle four sentences in each have been jumbled up and labelled P,Q, R and S. you are required to find the proper sequence of the four sentences and mark your response accordingly on the answer sheet.

- 36. S1: We don't know what to do with oue knowledge
  - S6: In the course of time they may rule over us altogether
  - P: For example, we are unable to manage our machines
  - O: We already find it difficult to do without machines
  - R: Machines should be fed properly and waited upon attentively; otherwise they refuse to work or cause destruction
  - S: Science has given us superhuman powers, which we do not use properly

The proper sequence should be

- A. SPRO
- B. PSOR D. SRPS
- C. QRPS

- 37. S1: The British rule in India has brought about moral, material, cultural and spiritual ruination of this great country
  - S6: We are not to kill anybody but it is our dharma to see that the curse of this Government is biotted out.
  - : I regard this rule as a curse
  - Q : Sedition has become my religion
  - R : Ours is a non-violent battle
  - : I am out to destroy this system of Government.

R

The proper sequence should be

- A. SPRQ
- B. PSQR
- C. QRPS
- D. SRPQ

## ORDERING OF WORDS IN A SENTENCE

**Directions:** Each of the following item in this section consists of a sentence, the parts of which have been jumbled. These parts have been labelled P,Q,R and S. given below each sentence are four sequences namely (a), (b),(c) and (d). You are required to rearrange the jumbled parts of the sentence and mark your response accordingly.

38. the urban local body elections unidentified gunmen and injured another during P

Q

shot dead two workers

S

- A. QSRP
- B. PQSR
- C. SPRQ
- D. RPSQ
- 39. both intense political and this state has a history of of syncretic accomplishments P S Q

religious contestation and

S

- A. SQPR
- B. PQSR
- C. SQRP
- D. QPSR
- 40. the father also in his quest for justice

Q by the system feels let down

R

P

S

- A. SQPR
- B. PSRQ
- C. SQRP
- D. PQRS



#### COMPREHENSION

**Directions :** In this section you have a passage. After the passage, you will find some items based on the passage. First, read the passage and answer the items based on it. You are required to select your answers based on the contents of the passage and opinion of the author only.

#### **Passage**

I do not wish to suggest that because we were one nation we had no differences, but it is submitted that our leading men travelled throughout India either on foot or in bullock-carts. They learned one another's languages and there was no aloofness amongst them. What do you think could have been the intention of those farseeing ancestors of ours who established Setubandha (Rameshwar) in the South, Jagannath in the East and Haridwar in the North as places of pilgrimage? You will admit they were no fools. They knew that worship of God could have been performed just as well at home. They taught us that those whose hearts were aglow with righteousness had the Ganges in their own homes. But they saw that India was one undivided land so made by nature. They, therefore, argued that it must be one nation. Arguing thus, they established holy places in various parts of India and fired the people with an idea of nationality in a manner unknown in other parts of the world. And we Indians are one as no two Englishmen are. Only you and I and others who consider ourselves civilized and superior persons imagine that we are many nations. It was after the advent of railways that we began to believe in distinctions, and you are at liberty now to say that it is through the railways that we are beginning to abolish those distinctions. An opium-eater may argue the advantage of opiumeating from the after that he began to understand the evil of the opium habit after having eaten it. I would ask you to consider well what I had said on the railways.

- 41. According to the author, India
  - A. has never been one nation
  - B. has been an aggregate of several nations
  - C. has always been one nation along with differences
  - D. became a nation after the British came
- 42. Why did the great sages of India establish pilgrimages in the different corners of the country?
  - A. Because they wanted to push people to travel to different places.
  - B. Because they could observe the underlying unity of the country as made by nature
  - C. Because they themselves had travelled to these places
  - D. Because they wanted people to be religious everywhere
- 43. In the passage, the author's attitude towards the railways is

- A. critical
- B. sympathetic
- C. indifferent
- D. apathetic
- 44. What does the author mean when he says that "whose hearts were aglow with righteousness had the Ganges in their own homes"?
  - A. One need not visit the Ganges to take holy bath
  - B. The Ganges has been polluted, so one should bath at home
  - C. One should take a holy dip in the Ganges to purify one's heart
  - D. The purity of heart is superior to observance of any ritual
- 45. The paragraph is written in a
  - A. dialogic style
  - B. prescriptive style
  - C. descriptive style
  - D. analytical style

## **FILL IN THE BLANK**

**Directions:** Each of the following sentences in this section has a blank space and four words or group of four words given after the sentence. Select the word or group of words you consider



most appropriate for the blank space and indicate your response on the answer sheet accordingly. 46. forests prevent erosion. A. drove off B. broke down B. Dense C. rode in A. Lean D. drove in D. Tidy The lecture was not very interesting. In C. Sparse Three people were arrested and an illegal fact I \_\_\_\_\_ in the middle of it. arms unit was \_\_\_\_\_ by the police in a A. showed off B. put off raid. C. dozed off D. plugged off A. revealed B. searched 50. The cops murder by kin. C. discovered D. busted A. suspect B. afford 48. A woman got into the car and \_ D. administer C. manage PART-B Which one of the following cell organelles 51. B. Chemical energy does NOT possess nucleic acid? C. Potential energy A. Nucleolus D. Thermal energy B. Chloroplast The light energy escaping from the sun can 58. C. Ribosome be spread by A. a shower of rain drops D. Plasma Membrane 52. Which one of the following cell organelles B. a plane mirror does NOT possess its own genetic material C. a convex lens encoding proteins? D. a combination of a convex lens and a A. Ribosome B. Nucleus concave lens C. Mitochondria D. Chloroplast The correct sequence of energy transfer Which one of the following is NOT a that occurs when an apple falls to the 53 component of conducting tissue in plants? ground is A. Fibres B. Tracheids A. Gravitational potential energy → heat C. Pericycle D. Sieve tubes energy to air  $\rightarrow$  kinetic energy  $\rightarrow$  heat energy to ground and apple → sound 54. Which one of the following organisms has energy vascular tissues? B. Gravitational potential energy → sound B. penicillium A. Cladophora energy → kinetic energy → heat energy C. Marsilea D. Anabaena to air  $\rightarrow$  heat energy to ground and 55. Which one of the following organisms apple represents the primary consumer category C. Gravitational potential energy → kinetic in an ecosystem? energy  $\rightarrow$  heat energy to air  $\rightarrow$  heat A. Caterpillar energy to ground and apple  $\rightarrow$  sound B. Crabapple tree energy C. Frog D. Gravitational potential energy → kinetic D. Sparrowhawk energy → sound energy → heat energy 56. Spring tides refer to to air  $\rightarrow$  heat energy to ground and A. greatest difference in the sea level at apple high and low tides 60. Which one of the following minerals is used B. lowest difference in the sea level at as a fuel in nuclear power stations? high and low tides A. Bauxite B. Quartz C. no difference in the sea level at high C. Feldspar D. Pitchblende and low tides Which one of the following is NOT a D. counteraction of gravitational pull of synthetic detergent? the sun to that of moon A. CH<sub>3</sub>(CH<sub>2</sub>)<sub>10</sub>CH<sub>2</sub>OSO<sub>3</sub>-Na<sup>+</sup> Which one of the following energy is stored 57. B.  $[CH_3(CH_2)_{15}-N-(CH_3)_3]^+Br^$ in the links between the atoms? C. CH(CH<sub>2</sub>)<sub>16</sub>COO<sup>-</sup>Na<sup>+</sup> A. Nuclear energy



- D. CH(CH<sub>2</sub>)<sub>16</sub>COO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>CH<sub>2</sub>CH<sub>2</sub>OH
- 62. Which one of the following is an example of a clean fuel?
  - A. Coke
- B. Propane
- C. Petrol
- D. Wax
- 63. Which one of the following metals does NOT react with cold water?
  - A. Calcium (Ca)
  - B. Potassium (K)
  - C. Magnesium (Mg)
  - D. Sodium (Na)
- 64. In which of the following pairs are the ions isoelectronic?
  - A. Mg<sup>2+</sup>, Ar
- B. Na+, O2-
- C. Al3+, Cl-
- D. K+, Ne
- 65. Which one of the following is used as a binder in paints?
  - A. Titanium dioxide
  - B. Novalac
  - C. Phthalocyanine
  - D. Silicones
- 66. Which one of the following is NOT true in reference to air mass?
  - A. Air mass forms either in tropical or in polar region
  - B. Air mass develops on continents as well as over ocean
  - C. Air mass develops in a cyclonic condition
  - D. Air mass changes the weather conditions
- National Water Academy, a centre of excellence in training and capacity building in water resource, is located at
  - A. New Delhi
- B. Kolkata
- C. Pune
- D. Chennai
- 68. "Campos" and "Llanos", Tropical Savanna grasslands are generally found in
  - A. Australia
- B. Central Africa
- C. South America
- D. East Asia
- 69. "Viticulture" is a common feature of which one of the following Australian cities?
  - A. Adelaide
- B. Darwin
- C. Hobart
- D. Brisbane
- 70. "Shamal" warm and dry wind is a "Local" wind found in
  - A. East Asia
  - B. West Coast of Africa
  - C. Sahara of Africa
  - D. Mesopotamia
- 71. "Inversion of Rainfall" is associated with

- A. Orographic rainfall
- B. Conventional rainfall
- C. Cyclonic rainfall (Tropical)
- D. Cyclonic rainfall (Temperature)
- 72. Who was the author of the book 'History of British India'?
  - A. Charles Grant
- B. John Stuart Mill
- C. James Mill
- D. William Jones
- 73. The Azamgarh Proclamation of august 25, 1857 stressed on which one of the following issues?
  - A. Hindu-Muslim divide
  - B. Support to the English Government
  - C. The return of the Badshahi
  - D. The imposition of heavy Jumas (revenue demand)
- 74. Which Viceroy had made the observation, "it's a beautiful world if it wasn't for Gandhi ...."?
  - A. Lord Irwin
  - B. Lord Wavell
  - C. Lord Mountbatten
  - D. Lord Willingdon
- 75. Which Indian businessman favoured 'healthy capitalism' in helping Gandhiji to work towards a 'common object'?
  - A. Ghanshyam Das Birla
  - B. Ambalal Sarabhai
  - C. Sir Biren Mookerjee
  - D. T. T. K. Krishnamachari
- 76. The art piece "In Memoriam" was a creation of which one of the following European painters?
  - A. Thomas Jones Barker
  - B. Joseph Noel Paton
  - C. Thomas Daniell
  - D. Charles D'Oyly
- 77. Which one of the following can charge an insulator?
  - A. Current electricity
  - B. Static electricity
  - C. Magnetic field
  - D. Gravitational field
- 78. At 20°C, the speed of sound in water is approximately
  - A. 330 m/s
- B. 800 m/s
- C. 1500 m/s
- D. 5000 m/s
- 79. Which one of the following could be the melting point of iron?
  - A. 25°C
- B. 37°C
- C. 500°C
- D. 1500°C



- 80. Let us consider a copper wire having radius r and length /. Let its resistance be R. If the radius of another copper wire is 2r and the length is //2 then the resistance of this wire will be
  - A. R B. 2R C. R/4 D. R/8
- 81. Basic scientific principle behind a nuclear reactor is
  - A. Nuclear fusion
  - B. Controlled nuclear fusion
  - C. Uncontrolled nuclear fission
  - D. Controlled nuclear fission
- 82. Which one of the following statements is NOT correct for the given reaction?

 $Fe(s) + CuSO_4(aq) \rightarrow FeSO_4(aq) + Cu(s)$ 

- A. Iron is the reducing agent
- B. The solution turns green in colour after the reaction
- C. Copper is a more reactive metal than iron
- D. The reaction is an example of a redox reaction
- 83. Which one of the following is an organic acid?
  - A. Hydrochloric acid
  - B. Nitric acid
  - C. Acetic acid
  - D. Sulphuric acid
- 84. Dinitrogen  $(N_2)$  and dioxygen  $(O_2)$  are the main constituents of air but they do not react with each other to form oxides of nitrogen because
  - A. the reaction requires initiation by a catalyst
  - b. oxides of nitrogen are unstable
  - C. the reaction is endothermic and requires very high temperature
  - D. the stoichiometry of  $N_2$  and  $O_2$  in air is not ideal for the reaction to take place
- 85. Who among the following has explained the phenomenon of photoelectric effect?
  - A. Max Planck
- B. Albert Einstein
- C. Neils Bohr
- D. Ernest Rutherford
- 86. The equivalent weight of oxalic acid in  $C_2H_2O_4.2H_2O$  is
  - A. 45

B. 63

C. 90

- D. 126
- 87. Which one of the following is NOT a west flowing river?
  - A. Periyar
- B. Bharatpuzha

- C. Pamba
- D. Tamraparni
- 88. Which one of the following rivers was earlier known as "Vitasta"?
  - A. Tista

B. Jhelum

- C. Tungabhadra
- D. Bharatpuzha
- 89. River Sarda drains in the Northern plains of Uttar Pradesh. Before entering in the plains, Sarda is known as
  - A. Saraswati

B. Bhagirathi

C. Kali

- D. Pindar
- 90. "Mission Indradhanush" is related to
  - A. Bullet train project
  - B. Agriculture development
  - C. Women empowerment
  - D. Full immunization
- 91. Which of the following is/are environmental effects of Rotation of the earth?
  - 1. Daily or diurnal rhythm in day light and air temperature
  - Flow path of both air and water are turned consistently in a sideward direction
  - 3. The movement of the tides

Select the correct answer using the code given below :

- A. 1 and 2 only
- B. 1 and 3 only
- C. 1, 2 and 3
- D. 3 only
- 92. Who among the following historians have described the Quit India movement as a 'spontaneous revolution'?
  - A. Gordon Johnson B. David Arnold
  - C. F G Hutchins
- D. Peter Robb

The following 3 (three) items consist of two statements, Statement I and statement II. Examine these two statements carefully and select the correct answer using the code given below:

#### Code:

- A. Both the statements are individually true and statement II is the correct explanation of Statement I
- B. Both the statements are individually true and 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 is
- 93. Statement I : Abul fazl shaped represented and articulated the ideas associated with the reign of Akbar



- Statement II: The qualities of Abul Fazl impressed Akbar who found the former suitable as an adviser and spokesperson for his policies
- 94. Statement I: The Kisan manifesto adopted by the All India Kisan Sabha in august 1936 contained radical demands

Statement II: The All India Kisan Sabha was a part of the Congress and maintained close relationship with the provincial Congress Committees

Statement I: The British ruled India 95. through a modern bureaucracy headed by the Indian Civil service, whose members were recruited through merit based on open competition

> Statement II: The Indian Civil Service was based on the whole hearted participation of Indian

- Two metallic wires A and B are made using copper. The radius of wire A is r while its length is I. A de voltage V is applied across the wire A, causing power dissipation, P. the radius of wire B is 2r and its length is 21 and the same de voltage V is applied across it causing power dissipation P1. Which one of the following is the correct relationship between P and P<sub>1</sub>?
  - A.  $P = 2P_1$
- B.  $P = P_1/2$
- C.  $P = 4P_1$
- D.  $P = P_1$
- 97. Consider the following statements about a solenoid:
  - 1. The magnetic field strength in a solenoid depends upon the number of turns per unit length in the solenoid
  - 2. The magnetic field strength in a solenoid depends upon the current flowing in the wire of the solenoid
  - 3. The magnetic field strength in a solenoid upon the diameter of the solenoid

Which of the statements given above are correct? /

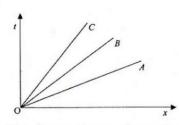
- A. 1, 2 and 3
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1 and 2 only
- 98. Light year is a unit of measurement of
  - A. very large distances
  - B. time interval in years
  - C. amount of light received on earth in a
  - D. mass of atoms

- The focal length of the objective lens of a telescope is 50cm. If the magnification of the telescope is 25, then the focal length of the eye-piece is
  - A. 12.5 cm
- B. 5 cm
- C. 2 cm
- D. 10 cm
- 100. Which one of the following forces is noncentral and non-conservative?
  - A. Frictional force
  - B. Electric force
  - C. Gravitational force
  - D. Machanical force
- 101. On exposure to moist air, copper gains a green coat on its surface due to formation of which one of the following compounds?
  - A. Copper carbonate
  - B. Copper oxide
  - C. Copper sulphate
  - D. Copper Nitrate
- 102. Which one of the following will NOT produce carbon dioxide on reacting with an aqueous solution of hydrochloric acid?
  - A. Limestone
- B. Quick lime
- C. Chalk
- D. Marble
- 103. Which one of the following substances is NOT a mixture?
  - A. Ice
- B. Ice-cream
- C. Air
- D. Honey
- 104. Which one of the following is an example of salt-Crystal growth?
  - A. Chemical weathering
  - B. Physical weathering
  - C. Biological weathering
  - D. Bio-chemical weathering
- 105. Which one of the following is the correct sequence of proved coal reserves in the Indian states in decreasing order?
  - A. Jharkhand, Chhattisgarh, Odisha, West
  - B. Jharkhand, Odisha, Chhattisgarh, West Bengal
  - C. Odisha, West Bengal, Jharkhand, Chhattisgarh
  - D. Odisha, Chhattisgarh, West Bengal, Jharkhand
- 106. Consider the following statements relating to Richer scale:
  - 1. It was devised in 1935 by Charles F. Richter
  - 2. It describes the quantity of energy released by a single earthquake



- 3. Richer Scale has no upper limit Which of the statements given above is/are correct?
- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3
- 107. Which one of the following ocean currents is NOT a cold ocean current?
  - A. Canary current
  - B. California current
  - C. Kuroshio Current
  - D. Oyashio current
- 108. What is the time gap in occurrence of two successive at a given place on the ocean surface?
  - A. 12 hours
  - B. 12 Hours 26 minutes
  - C. 24 hours
  - D. 24 hours 52 minutes
- 109. Tooth enamel is made up of which one of the following calcium compounds?
  - A. Calcium carbonate
  - B. Calcium sulphate
  - C. Calcium hydroxide
  - D. Calcium phosphate
- 110. Suppose there are two planets, 1 and 2, having the same density but their radii are  $R_1$  and  $R_2$  respectively, where  $R_1 > R_2$ . The accelerations due to gravity on the surface of these planets are related as
  - A.  $g_1 > g_2$
  - B.  $g_1 < g_2$
  - C.  $g_1 = g_2$
  - D. Can't say anything
- 111. The sun is seen before it rises and for a short while after it sets. This is because of
  - A. total internal reflection
  - B. atmosphere refraction
  - C. apparent shift in the direction of Sun
  - D. dispersion

112.

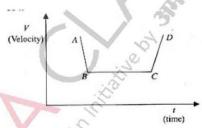


The figure shown above gives the time (t) versus position (x) graphs of three objects A, B and C. Which one of the following is

the correct relation between their speeds  $V_A$ ,  $V_B$  and  $V_C$  respectively at any instant (t > 0)?

- A.  $V_A < V_B < V_C$
- $B V_A > V_B > V_C$
- C.  $V_A = V_B = V_C \neq 0$
- D.  $V_A = V_B = V_C = 0$
- 113. 1 dyne (a unit of force in CGS system) equals to
  - A. 103 g cm/s2
- B.  $10^{-3}$  g cm/s<sup>2</sup>
- C. 105 kg m/s2
- D.  $10^{-5} \text{ kg m/s}^2$

114.



In the given velocity (V) versus time (t) graph, accelerated and decelerated motions are respectively represented by line segments

- A. CD and BC
- B. BC and AB
- C. CD and AB
- D. AB and CD
- 115. Which one of the following statements regarding a thermos flask is NOT correct?
  - A. The walls of flask are separated by vacuum and made of glass which is a poor conductor of heat
  - The glass walls themselves have shiny surfaces
  - C. The surface of inner wall radiates good amount of heat and the surface of outer wall absorbs some of the heat that is radiated from the inner wall
  - D. The cork supports are poor conductors of heat
- 116. 'Black hole' is a
  - A. huge black star which has zero acceleration due to gravity on its surface
  - B. star which has moderate acceleration due to gravity on its surface
  - C. star which has collapsed into itself and has large acceleration due to gravity on its surface.
  - star which has collapsed into itself and has zero acceleration due to gravity on its surface
- 117. The formula for conversion between Fahrenheit and Celsius is



 $^{\circ}F = X + (1.8 \times ^{\circ}C)$ 

What is factor X?

B. 22

A. 32C. 98

D. 42

- 118. When a beam of white light passes through a glass prism, the colour of light beam that deviates the least is
  - A. Blue

B. Red

C. Green

D. Violet

- 119. LIGO stands for
  - A. Laser interferometer Gravitational wave observatory
  - B. Light interferometer Gravitational wave observatory
  - C. Light induced Gravity observatory
  - D. Laser induced Gaseous optics
- 120. A fuse wire must be
  - A. conducting and of low melting point
  - B. conducting and of high melting point
  - C. insulator and of high melting point
  - D. insulator and of low melting point
- 121. Kamarajar Port was commissioned in 2001 to handle thermal coal requirements. It is situated along the coast of which Indian state?
  - A. Andhra Pradesh B. Odisha
  - C. Tamil Nadu D.
- D. Karnataka
- 122. Which one of the following inion Territories of India is the smallest in terms of geographical area?
  - A. Daman and Diu
  - B. Chandigarh
  - C. Dadra and Nagar Haveli
  - D. Lakshadweep
- 123. Which one of the following can be said to be essentially related to 'Polar front Theory'?
  - A. Anticyclone
  - B. Tropical cyclone
  - C. Temperate cyclone
  - D. Inter Tropical Convergence
- 124. Brahmaputra and Indus rivers are antecedent rivers. Which one of the following may be the true definition of an antecedent drainage?
  - A. Which follows the initial slope of the Himalava
  - B. Which existed before the Himalayan range came into existence
  - C. Which followed the dip or rock beds of the Himalaya

- Which followed the strikes of rock beds of the Himalaya
- 125. The Karachi resolution of Congress in 1931 advocated which one of the following issues?
  - State shall not own or control key industries and services
  - State shall handover the key industries and services to the Indian business groups
  - C. State should allow the Indian business group to invest fifty per cent of the capital
  - State shall own or control key industries and services
- 126. The treaty of Schonbrunn (1809) was signed after which one of the following battles?
  - A. Battle of Austerlitz
  - B. Battle of Tilsit
  - C. Battle of Wagram
  - D. Battle of Lisbon
- 127. Which one of the following statements about the New Model Unions is/are correct?
  - 1. The new model unions were formed in the 1850s
  - 2. The new model unions were formed in the 1880s
  - 3. The new model unions comprised a Labour Party idea
  - 4. The new model unions excluded women in the 1920s

Select the correct answer using the code given below :

- A. 1 only
- B. 2 only
- C. 3 and 4
- D. 3 only
- 128. The Truman Doctrine of 1947 was announced to achieve which one of the following?
  - A. Containment of the USSR
  - B. Increasing agricultural production in the USA
  - C. Offering friendship to Europe
  - D. Strengthening the UNO
- 129. Which of the following statements is/are correct?
  - In 1948, Burma was admitted to the United Nations and immediately supported the USA in the cold war
  - In 1948, Burma joined the United Nations but refused to denounce China as the Aggressor in the Korean War



Select the correct answer using the code given below :

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2
- 130. Who among the following presented 'The April Theses' to the Russian people in 1917?
  - A. Stalin
- B. Trotsky
- C. Bukharin
- D. Lenin
- 131. An election commissioner can be removed from office on the recommendation of
  - A. The chief Justice of India
  - B. The chief Election Commissioner
  - C. The president of India
  - D. The Parliament
- 132. Which one of the following statements regarding the Rajya Sabha is NOT correct?
  - A. Its members are elected by the elected members of the Legislative assembly of a state
  - B. The election follows the system of proportional representation by means of a single transferable vote
  - C. 1/3rd of its permanent body, but can be dissolved earlier by the President
  - D. It is a permanent body, but can be dissolved earlier by the President
- 133. Fundamental right guaranteed under which one of the following Articles of the Constitution of India is available only to the citizens of India?
  - A. Article 19
- B. Article 20
- C. Article 21
- D. Article 22
- 134. The treaty of Yandabo was signed in
  - A. 1826
- B. 1825
- C. 1824
- D. 1823
- 135. In the Manusmriti which form of marriage results from the "Voluntary union of a maiden and her lover"?
  - A. Eighth form
- B. Fifth form
- C. Seventh form
- D. Sixth form
- 136. Consider the following description of the Samadhi of a former Prime Minister of India:

Central Samadhi platform comprises nine square Mack polished granite solid Stone blocks, capped with a Diya' in the centre. The number nine holds significance and represents the navarasas, navarairas and navagrahas. Then placement of the nine-square Samadhi is in a circular lotus shaped pattern. The nine-square platform

is accessed in four cardinal directions by pathways made in white composite tiles so that the floor does not get heated.

Identify the Samadhi:

- A. Shakti Sthal
- B. Shantivan
- C. Sadaiv Atai
- D. Veer Bhumi
- 137. IMBEZ is a joint exercise conducted regularly between armies of India and
  - A. Malaysia
- B. Maldives
- C. Mauritius
- D. Myanmar
- 138. Who among the following was awarded the Hindu Prize in Fiction category for the year 2018?
  - A. Neelum Saran Gour
  - B. N Kalyan Raman
  - C. Manoranjan Byapari
  - D. Arunav Sinha
- 139. Who among the following was appointed as head of the seven member committee to look into revenue shortfall being faced by the states after the GST roll-out in India and suggest steps for augmenting collections?
  - A. Himanta Biswa Sharma
  - B. Thomas Isaac
  - C. Sushil Modi
  - D. Capt Abhimanyu
- 140. The 15th Pravasi Bharatiya Divas, 2019 was held in
  - A. New Delhi
- B. Gandhi Nagar
- C. Prayagraj
- D. Varanasi
- 141. Which one of the following cities was named by UNESCO as world Capital of Architecture for 2020?
  - A. Tokyo
- B. Johannesburg
- C. Rio de Janerio
- D. New Delhi
- 142. Who among the following was named ICC's emerging player of the year 2018?
  - A. Rishabh pant
  - B. Josh Hazlewood
  - C. Hasan Ali
  - D. Mustafizur Rahman
- 143. India's first private sector howitzer gunmaking unit is located at
  - A. Jamshedpue
- B. Kolkata
- C. Hazira
- D. Gwalior
- 144. Which of the following pairs of old names and new names of islands in India is/are correctly matched?
  - I. Ross island : Shaheed DweepII. Neil Island : Netaji Subhas



Chnadra Bose Dweep

III. Havelock Island : Swaraj Dweep Select the correct answer using the code given below :

- A. 1, 2 and 3
- B. 2 and 3 only
- C. 1 and 2 only
- D. 3 only
- 145. Who among the following was posthumously conferred with the Ashoka Chakra, India's Highest peacetime gallentry award, in 2019?
  - A. Jyoti Prakash Nirala
  - B. Nazir Ahmad Wani
  - C. Hangpan Dada
  - D. Mohan Nath Goswami
- 146. As per the code of the nomenclature, which one of the following is the correct way of writing a biological name?
  - A. Amoeba Proteus
  - B. Amoeba proteus
  - C. amorba proteus
  - D. Amoeba Proteus
- 147. Which one of the following statements regarding Electrocardiogram is correct?
  - A. Electrocardiogram is graphical representation of electrical activity of cornea
  - B. Electrocardiogram is graphical representation of activity of kidney
  - C. Electrocardiogram is graphical representation of activity of brain

- Electrocardiogram is graphical representation of electrical activity of heart
- 148. Which one of the following statements regarding Penicillin is correct?
  - A. Penicillin resistant bacteria can store this antibiotic in vacuole
  - B. Penicillin resistant bacteria can degrade this antibiotic by an enzyme called  $\beta$ -lactamase
  - C. Penicillin resistant bacteria can degrade this antibiotic by an enzyme called lactic acid dehydrogenase
  - D. Penicillin is not absorbed by bacteria; so most bacteria are resistant
- 149. Which one of the following organelles of mammalian cell is rich in hydrolytic enzymes?
  - A. Mitochondria
- B. Ribosomes
- C. Lysosome
- D. Nucleus
- 150. Which one of the following statements regarding cholera is correct?
  - Cholera is a disease that causes loss of memory
  - B. Cholera is a disease of muscles due to consumption of alcohol
  - C. Cholera is a disease due to consumption of contaminated food or water
  - D. Cholera is a genetic disease.