



# MENTORS EDUSERV SCHOLASTIC APTITUDE TEST (ME-SAT) SAMPLE TEST PAPER

[For Students presently in Class 9 going to Class 10 in 2019]

Time : 2 hours

Maximum Marks: 300

## INSTRUCTIONS

DO NOT BREAK THE SEALS ON THIS BOOKLET, AWAIT INSTRUCTIONS FROM THE INVIGILATOR.

**[A] General**

1. This Question paper contains **FIVE** Parts, **A to E** (Physics, Chemistry, Mathematics, Biology & Mental Ability).
2. This Question Paper contains **19 pages**.
3. This question paper contains total **100 questions** (20 questions each in Physics, Chemistry, Mathematics, Biology and Mental Ability).
4. The Question Paper has blank spaces at the bottom of each page for rough work. No additional sheets will be provided for rough work.
5. Blank papers, clip boards, log tables, slide rule, calculators, cellular phones, pagers and electronic gadgets, in any form, are **NOT** allowed.
6. The **OMR** (Optical Mark Recognition) sheet shall be provided separately.

**[B] Answering on the OMR**

7. In all the parts, each question will have **4 choices** out of which **only one choice is correct**.
8. Darken the bubble with **Ball Pen (Blue or Black) ONLY**.

**[C] Filling OMR**

9. On the **OMR sheet**, fill all the details properly and completely, otherwise your OMR will not be checked.
10. Do not write anything or tamper the barcode in the registration no. box.

**[D] Marking Scheme:**

11. For each question you will be awarded **3 marks** if you darken the bubble corresponding to the correct answer **ONLY** and **zero (0) marks** if no bubble is darkened. In all other cases, **minus one (-1) mark** will be awarded.

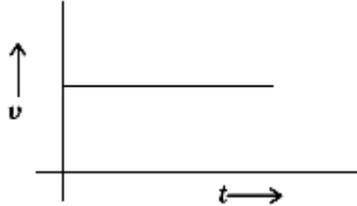
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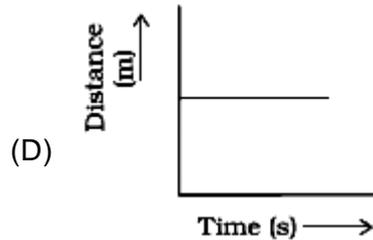
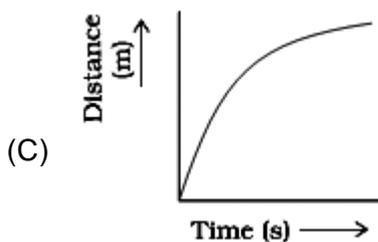
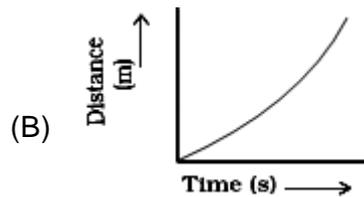
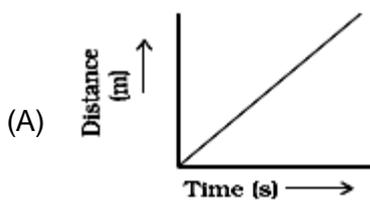
SEAL

## PART-A : PHYSICS

1. From the given  $v - t$  graph, it can be inferred that the object is



- (A) in uniform motion                      (B) at rest  
 (C) in non-uniform motion                (D) moving with uniform acceleration
2. Suppose a boy is enjoying a ride on a *merry-go-round* which is moving with a constant speed of  $10 \text{ m s}^{-1}$ . It implies that the boy is
- (A) at rest                                      (B) moving with no acceleration  
 (C) in accelerated motion                (D) moving with uniform velocity
3. Which of the following figures represents uniform motion of a moving object correctly?



Space for rough work

4. A passenger in a moving train tosses a coin which falls behind him. It means that motion of the train is  
(A) accelerated (B) uniform (C) retarded (D) along circular tracks
5. Rocket works on the principle of conservation of  
(A) mass (B) energy (C) momentum (D) velocity
6. An object is put one by one in three liquids having different densities. The object floats with  $\frac{1}{9}$ ,  $\frac{2}{11}$  and  $\frac{3}{7}$  parts of their volumes outside the liquid surface in liquids of densities  $d_1$ ,  $d_2$  and  $d_3$  respectively. Which of the following statement is correct?  
(A)  $d_1 > d_2 > d_3$  (B)  $d_1 > d_2 < d_3$  (C)  $d_1 < d_2 > d_3$  (D)  $d_1 < d_2 < d_3$
7. In the relation  $F = G \frac{M m}{d^2}$ , the quantity G  
(A) depends on the value of g at the place of observation  
(B) is used only when the earth is one of the two masses  
(C) is greatest at the surface of the earth  
(D) is universal constant of nature
8. A girl stands on a box having 60 cm length, 40 cm breadth and 20 cm width in three ways. In which of the following cases, pressure exerted by the brick will be  
(A) maximum when length and breadth form the base  
(B) maximum when breadth and width form the base  
(C) maximum when width and length form the base  
(D) the same in all the above three cases

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Space for rough work

9. An iron sphere of mass 10 kg has the same diameter as an aluminium sphere of mass is 3.5 kg. Both spheres are dropped simultaneously from a tower. When they are 10 m above the ground, they have the same
- (A) acceleration (B) momentum  
(C) potential energy (D) kinetic energy
10. The work done on an object does not depend upon the
- (A) displacement  
(B) force applied  
(C) angle between force and displacement  
(D) initial velocity of the object
11. When we change feeble sound to loud sound we increase its
- (A) frequency (B) amplitude (C) velocity (D) wavelength
12. A car travels  $\frac{1}{3}$  rd distance on a straight road with a velocity of 10 km/hr, next  $\frac{1}{3}$  rd with velocity 20 km/hr and the last  $\frac{1}{3}$  rd with velocity 60 km/hr. What is the average velocity of the car in the whole journey?
- (A) 4 km/hr (B) 6 km/hr (C) 12 km/hr (D) 18 km/hr
13. A stone is dropped into a well in which the level of water is h, below the top of the well. If v is velocity of sound, then time T after which the splash is heard is equal to
- (A)  $\frac{2h}{v}$  (B)  $\sqrt{\frac{2h}{v}} + \frac{h}{g}$  (C)  $\sqrt{\frac{2h}{g}} + \frac{h}{v}$  (D)  $\sqrt{\frac{h}{2g}} + \frac{2h}{v}$

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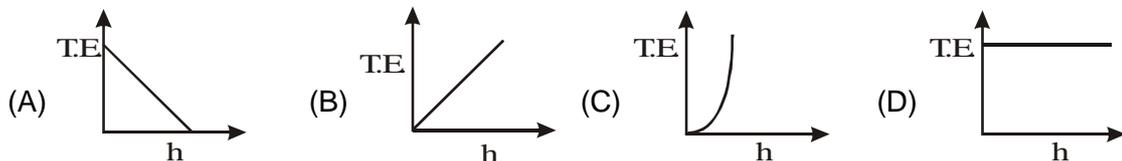
14. An electron of mass  $9 \times 10^{-31}$  kg is moving in a straight line path with a velocity of  $6 \times 10^7$  ms<sup>-1</sup>. The momentum of electron is :

(A)  $5.4 \times 10^{-23}$  Ns      (B)  $5.4 \times 10^{-24}$  Ns      (C)  $4.5 \times 10^{-23}$  Ns      (D)  $0.5 \times 10^{-24}$  Ns

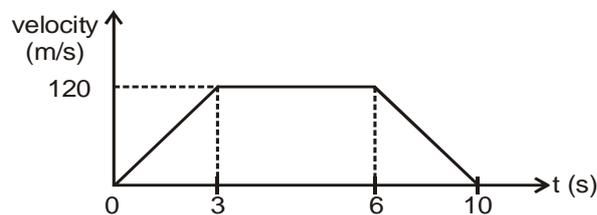
15. Two bodies 'A' and 'B' having masses 'm' and '2m' respectively are kept at a distance 'd' apart. A small particle is to be placed so that the net gravitational force on it, due to the bodies A and B, is zero. Its distance from the mass A should be :-

(A)  $x = \frac{d}{1 + \sqrt{2}}$       (B)  $x = \frac{d}{1 + \sqrt{4}}$       (C)  $x = \frac{d}{1 + \sqrt{3}}$       (D)  $x = \frac{d}{1 + \sqrt{6}}$

16. A graph of the total energy, (P.E + K.E.) of a freely falling body from a height is plotted. Which of the following is the best approximation?



17. The velocity-time graph of an object of mass 50g is shown in the figure. What is the force acting on the object in the time interval 6-10 s?



(A) -2.5 N      (B) -1.5 N      (C) 1.5 N      (D) 2.5 N

Space for rough work

18. Due to application of force both blocks move together. Each block exerts a force of 6 N on each other. The acceleration of the blocks will be



- (A)  $3 \text{ m/s}^2$                       (B)  $6 \text{ m/s}^2$                       (C)  $9 \text{ m/s}^2$                       (D)  $12 \text{ m/s}^2$
19. A horse pulls a wagon with a force of 360 N at an angle of  $60^\circ$  with the horizontal at a speed by 10 km/hr. Find the power of the horse.
- (A) 500 watt                      (B) 480 watt                      (C) 400 watt                      (D) None of these
20. A solid weighs 200 gf in air, 160 gf in water and 170 gf in a liquid. Calculate the relative density of the solid and that of the liquid.
- (A) 5, 0.75                      (B) 6, 1.7                      (C) 3, 2.75                      (D) 4, 1.25

## PART-B : CHEMISTRY

21. Which of the following has highest intermolecular forces of attraction?
- (A) Liquid water                      (B) Liquid ethyl alcohol  
(C) Gaseous  $\text{CO}_2$                       (D) Solid  $\text{CO}_2$
22. As the solid melts to form liquid,
- (A) interparticle forces of attraction decreases  
(B) the kinetic energy of the particles increases  
(C) compressibility increases  
(D) all of these

Space for rough work

23. The force that binds the particles of matter together is known as  
(A) intermolecular space (B) bond  
(C) intermolecular force (D) nuclear force
24. Evaporation of a liquid can take place  
(A) at its boiling point (B) below its boiling point  
(C) at all temperatures (D) at a fixed temperature
25. Which gas present in air has the highest boiling point?  
(A) Oxygen (B) Nitrogen (C) Argon (D) Hydrogen
26. If we heat iodine, then it is a  
(A) physical change (B) chemical change  
(C) no change (D) colour change
27. Which of the following statement is correct?  
(A) A pure substance must contain only one type of atom.  
(B) A mixture containing two compounds must be heterogeneous.  
(C) A heterogeneous mixture must contain at least three elements.  
(D) A homogeneous mixture must be uniform.
28. A liquid non-metal, amongst the following is  
(A) bromine (B) mercury (C) phosphorus (D) both (a) and (b)
29.  $6.022 \times 10^{20}$  atoms of silver (at. mass 108 u) weight  
(A)  $108 \times 10^3$  g (B) 108 g (C) 0.108 g (D) 10.8 g.
30. The volume occupied by 4.4 g of  $\text{CO}_2$  at STP is  
(A) 22.4 L (B) 2.24 L (C) 0.224 L (D) 0.1 L.

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Space for rough work

31. Number of atoms in 4.25 g of  $\text{NH}_3$  is nearly  
(A)  $1 \times 10^{23}$  (B)  $1.5 \times 10^{23}$  (C)  $2 \times 10^{23}$  (D)  $6 \times 10^{23}$
32. The volume occupied by 1 mole atom of a diatomic gas at STP is  
(A) 22.4 L (B) 11.2 L (C) 5.6 L (D) 44.8 L.
33. Which one of the following pair of gases contains the same number of molecules?  
(A) 16 g of  $\text{O}_2$  and 14 g of  $\text{N}_2$  (B) 8 g of  $\text{O}_2$  and 22 g of  $\text{CO}_2$   
(C) 28 g of  $\text{N}_2$  and 22 g of  $\text{CO}_2$  (D) 32 g of  $\text{O}_2$  and 32 g of  $\text{N}_2$ .
34. Rutherford's experiment on scattering of  $\alpha$ -particles showed for the first time that the atom has  
(A) nucleus (B) electron (C) proton (D) neutron
35. According a Bohr's atomic model, as we move away from the nucleus  
(A) radius of the orbit go on increasing (B) energy of the orbits go on decreasing  
(C) both (a) and (b) (D) neither (a) or (b)
36. The magnetic quantum number represents  
(A) size of the orbital (B) spin angular momentum  
(C) orbital angular momentum (D) spatial orientation of orbital
37. For a given principal level  $n=4$ , the energies of its subshells are in the order  
(A)  $s < d < f < p$  (B)  $s < p < d < f$  (C)  $d < f < p < s$  (D)  $s < p < f < d$ .
38. Which experiment find out charge on the electron?  
(A) Oil drop experiment  
(B) X-rays scattering experiment  
(C) Cathode-ray experiment  
(D) Anode-ray

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Space for rough work

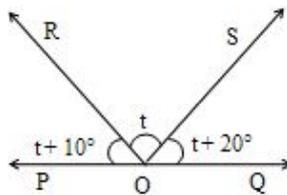
39. Identify the false statement.
- (A) colloids are homogeneous  
 (B) colloids show Tyndall effect  
 (C) colloids show brownian movement  
 (D) The size of colloidal particles range between 1 - 100 nm.
40. Nuclear model of the atom was proposed by
- (A) Thomson            (B) Neils Bohr            (C) Moseley            (D) Rutherford

### PART-C : MATHEMATICS

41.  $\left(\frac{x^l}{x^{-m}}\right)^{l^2+m^2-lm} \times \left(\frac{x^m}{x^{-n}}\right)^{m^2+n^2-mn} \times \left(\frac{x^n}{x^{-l}}\right)^{n^2+l^2-nl}$  is equal to
- (A) 1                      (B)  $x^{l+m+n}$             (C) x                      (D)  $x^{l+m-n}$
42. If  $2^a 2^b 2^c = 256$  then the average of a, b and c is
- (A)  $\frac{7}{3}$                       (B)  $\frac{4}{3}$                       (C)  $\frac{8}{3}$                       (D) 8
43. If the co-ordinate of two opposite vertices of a square are (a,b) and (b,a) then the area of the square is
- (A)  $(a+b)^2$             (B)  $2(a+b)^2$             (C)  $(a-b)^2$             (D)  $2(a-b)^2$
44. If the line segment joining (2, 3) and (-1, 2) is divided internally in the ratio 3 : 4 by the graph of the equation  $x + 2y = k$ , then the value of k is
- (A)  $\frac{5}{7}$                       (B)  $\frac{31}{7}$                       (C)  $\frac{36}{7}$                       (D)  $\frac{41}{7}$

Space for rough work

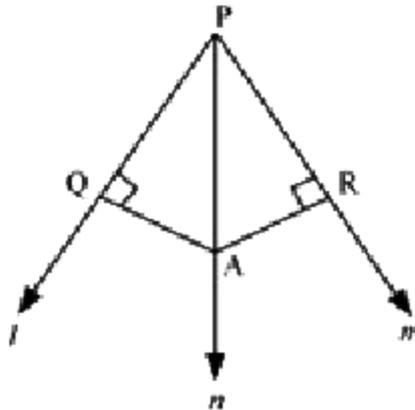
45.  $\sqrt{10 + \sqrt{24} + \sqrt{60} + \sqrt{40}}$  is equal to  
 (A)  $\sqrt{2} + \sqrt{3} + \sqrt{5}$  (B)  $\sqrt{5} + \sqrt{3} + \sqrt{7}$  (C)  $1 + \sqrt{2} + \sqrt{7}$  (D)  $\sqrt{5} + \sqrt{3} - \sqrt{7}$
46. The sides of a triangle are in the ratio 1:2:2 and its perimeter is 150 cm. The area of the triangle is:  
 (A)  $375 \text{ cm}^2$  (B)  $225\sqrt{15} \text{ cm}^2$  (C)  $250 \text{ cm}^2$  (D)  $500\sqrt{15} \text{ cm}^2$
47. If a vertex of a triangle is (1, 1) and the mid-points of two sides through this vertex are (-1, 2) and (3, 2), then the centroid of the triangle is :  
 (A)  $\left(-1, \frac{7}{3}\right)$  (B)  $\left(-\frac{1}{3}, \frac{7}{3}\right)$  (C)  $\left(1, \frac{7}{3}\right)$  (D)  $\left(\frac{1}{3}, \frac{7}{3}\right)$
48. Equation of the line passing through (-1, 2) and perpendicular to  $x - y + 2 = 0$  is  
 (A)  $x + y = 1$  (B)  $x - y = 1$  (C)  $x + y = 2$  (D)  $x - y + 1 = 0$
49. If  $\frac{(\sqrt{a} - \sqrt{b})^2 + 4\sqrt{ab}}{a - b} = \frac{5}{3}$  then a : b equals  
 (A) 4 : 1 (B) 8 : 1 (C) 16 : 1 (D) 12 : 1
50. In the figure the  $\angle \text{POR}$  is



- (A)  $90^\circ$  (B)  $60^\circ$  (C)  $45^\circ$  (D)  $30^\circ$

Space for rough work

51. If  $10^x = 64$ , then the value of  $10^{\frac{x}{2}+1}$  is  
(A) 18 (B) 42 (C) 80 (D) 81
52. The sum of the measures of the external angles of an octagon is  
(A)  $900^\circ$  (B)  $720^\circ$  (C)  $360^\circ$  (D)  $180^\circ$
53. A factor of  $x^3 - 6x^2 - 6x + 1$ , is  
(A)  $x + 1$  (B)  $x - 1$  (C)  $x - 2$  (D)  $2x + 1$
54. The altitudes of triangle are 12, 15 and 20 units. The largest angle in the triangle is :  
(A)  $75^\circ$  (B)  $90^\circ$  (C)  $120^\circ$  (D)  $135^\circ$
55. The remainder when  $(x^{51} + 51)$  is divided by  $(x + 1)$  is  
(A) 0 (B) 1 (C) 51 (D) 50
56. In the given figure, line  $n$  is the bisector of  $\angle P$ .



If  $PA = 17$  cm and  $PQ = 15$  cm then the perimeter of quadrilateral PQAR is

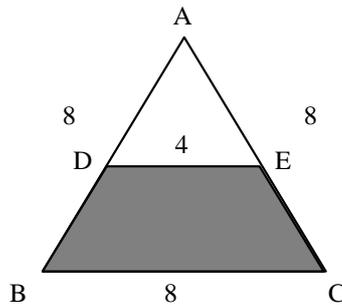
- (A) 40 cm (B) 46 cm (C) 60 cm (D) 63 cm

Space for rough work

57. If the perimeter of an isosceles right angled triangle is  $(6+3\sqrt{2})$  m then the area of the triangle is

- (A)  $2.5 \text{ m}^2$                       (B)  $3 \text{ m}^2$                       (C)  $4.5 \text{ m}^2$                       (D)  $5 \text{ m}^2$

58. The area of the shaded region, if  $\triangle ADE$  is also an equilateral triangle is



- (A)  $12\sqrt{3}$  squnits              (B)  $10\sqrt{2}$  squnits              (C)  $8\sqrt{5}$  squnits              (D)  $6\sqrt{7}$  squnits

59. The area of a trapezium-shaped field is  $480 \text{ m}^2$ , the height is 15 m and one of the parallel sides is 20 m then the other parallel side is

- (A) 30 m                      (B) 34 m                      (C) 40 m                      (D) 44 m

60. Consider the points A ( a, b + c ), B ( b, c + a ), and C ( c, a + b ) be the vertices of  $\triangle ABC$ . The area of  $\triangle ABC$  is :

- (A)  $2(a^2 + b^2 + c^2)$                       (B)  $\frac{a^2 + b^2 + c^2}{6}$   
 (C)  $2(ab + bc + ca)$                       (D) None of these

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Space for rough work

**PART-D : BIOLOGY**

61. Chromosomes are made up of  
(A) DNA (B) Protein (C) DNA and Protein (D) RNA
62. Which of these options are not a function of Ribosomes?  
(i) It helps in manufacture of protein molecules  
(ii) It helps in manufacture of enzymes  
(iii) It helps in manufacture of hormones  
(iv) It helps in manufacture of starch molecules  
(A) (i) and (ii) (B) (ii) and (iii) (C) (iii) and (iv) (D) (iv) and (i)
63. Following are a few definitions of osmosis. Read carefully and select the correct definition  
(A) Movement of water molecules from a region of higher concentration to a region of lower concentration through a semipermeable membrane  
(B) Movement of solvent molecules from its higher concentration to lower concentration  
(C) Movement of solvent molecules from higher concentration to lower concentration of solution through a permeable membrane  
(D) Movement of solute molecules from lower concentration to higher concentration of solution through a semipermeable membrane
64. The undefined nuclear region of prokaryotes are also known as  
(A) Nucleus (B) Nucleolus (C) Nucleic acid (D) Nucleoid
65. Find out incorrect sentence  
(A) Parenchymatous tissues have intercellular spaces.  
(B) Collenchymatous tissues are irregularly thickened at corners.  
(C) Apical and intercalary meristems are permanent tissues.  
(D) Meristematic tissues, in its early stage, lack vacuoles.

Space for rough work

66. Which cell does not have perforated cell wall?
- (A) Tracheids (B) Companion cells  
(C) Sieve tubes (D) Vessels
67. A person met with an accident in which two long bones of hand were dislocated. Which among the following may be the possible reason?
- (A) Tendon break (B) Break of skeletal muscle  
(C) Ligament break (D) Areolar tissue break
68. Meristematic tissues in plants are
- (A) Localised and permanent (B) Not limited to certain regions  
(C) Localised and dividing cells (D) Growing in volume
69. Bone matrix is rich in
- (A) Fluoride and Calcium (B) Calcium and Phosphorus  
(C) Calcium and Potassium (D) Phosphorus and Potassium
70. Contractile proteins are found in
- (A) Bones (B) Blood (C) Muscles (D) Cartilage
71. Which one of the following is not a bacterial disease?
- (A) Cholera (B) Tuberculosis (C) Anthrax (D) Influenza
72. Which one of the following disease is not transmitted by mosquito?
- (A) Brain fever (B) Malaria (C) Typhoid (D) Dengue
73. AIDS cannot be transmitted by
- (A) Sexual contact (B) Hugs (C) Breast feeding (D) Blood transfusion

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Space for rough work

74. Which one of the following is not important for individual health?
- (A) Living in clean space
  - (B) Good economic condition
  - (C) Social equality and harmony
  - (D) Living in a large and well furnished house
75. You are aware of Polio Eradication Programme in your city. Children are vaccinated because
- (A) Vaccination kills the polio causing microorganisms
  - (B) Prevents the entry of polio causing organism
  - (C) It creates immunity in the body
  - (D) All the above
76. Which one is not a source of carbohydrate?
- (A) Rice
  - (B) Millets
  - (C) Sorghum
  - (D) Gram
77. To solve the food problem of the country, which among the following is necessary?
- (A) Increased production and storage of food grains
  - (B) Easy access of people to the food grain
  - (C) People should have money to purchase the grains
  - (D) All of the above
78. Cattle husbandry is done for the following purposes
- (i) Milk Production
  - (ii) Agricultural work
  - (iii) Meat production
  - (iv) Egg production
- (A) (i), (ii) and (iii)
  - (B) (ii), (iii) and (iv)
  - (C) (iii) and (iv)
  - (D) (i) and (iv)
79. Which one of the following fishes is a surface feeder?
- (A) Rohus
  - (B) Mrigals
  - (C) Common carps
  - (D) Catlas

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**Space for rough work**

80. Preventive and control measures adopted for the storage of grains include

- (A) Strict cleaning (B) Proper disjoining  
(C) Fumigation (D) All of the above

### PART-E : MENTAL ABILITY

**DIRECTIONS (Q.Nos. 81) :** In the following questions, select the related word/letters/number from the given alternatives.

81. YTOJ : XSNI :: WRMH : ?

- (A) VQLG (B) TOJE (C) RMHC (D) UPKF

**DIRECTIONS (Q Nos. 82-83) :** Select the one which is different from other three alternatives.

82. (A) Rival (B) Opponent (C) Foe (D) Ally

83. (A) 27 (B) 35 (C) 18 (D) 9

84. Arrange the following words as per order in the English dictionary.

1. Live 2. Litter 3. Little 4. Literacy  
5. Living

- (A) 3, 4, 2, 1, 5 (B) 3, 2, 4, 5, 1 (C) 4, 3, 5, 2, 1 (D) 4, 2, 3, 1, 5

**DIRECTIONS (Q.No. 85) :** In the following questions, a series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

85. SHG, RIF, QJE, PKD, ?

- (A) NME (B) NLB (C) OLE (D) OLC

86. From the given alternative words, select the word which cannot be formed using the letters of the given word INCARCERATION

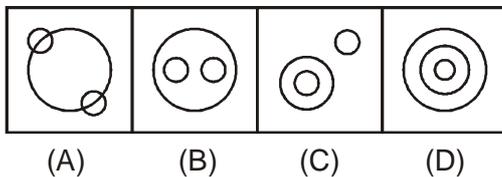
- (A) RELATION (B) TERRAIN (C) INACTION (D) CREATION

Space for rough work

87. In an examination, 78% of the total students who appeared were successful. If the total number of failures was 176 and 34% got first class, then how many students got first class?
- (A) 272                      (B) 112                      (C) 210                      (D) 254
88. Pratap starts from school and walks 7 km towards East. He takes a left and walks 4 km, then takes a right and walks 2 km, again takes a right and walks 3 km. Which direction is he facing now?
- (A) South                      (B) North                      (C) East                      (D) West

**DIRECTIONS (Q.Nos.89) :** In the following questions, identify the diagram that best represents the relationship among the classes given below.

89. Factory, Machinery, Product



**DIRECTION (Q No. 90) :** Select the related word/letters/number from the given alternative :

90. 4 : 17 :: 7 : ?

(A) 48                      (B) 50                      (C) 51                      (D) 49

**DIRECTIONS (Q. Nos. 91) :** Select the number group similar to the given group from the following four alternatives

91. Given Group : (84, 92, 109)

(A) 9,17, 36                      (B) 34, 42, 59                      (C) 7, 16, 32                      (D) 63, 71, 89

92. Choose the related day from the given alternatives: Monday : Saturday :: Thursday : ?

(A) Wednesday                      (B) Friday                      (C) Tuesday                      (D) Sunday

Space for rough work

**DIRECTIONS (93) :** In the following questions select the related letters/word/number from the given alternatives.

93. Almirah : Key :: Door : ?

- (A) Bolt                      (B) Nut                      (C) Eye-piece                      (D) Name Plate

94. Anoop starts walking towards south. After walking 15 m he turns towards North. After walking 20 m, he turns towards East and walks 10 m. He then turns towards south and walks 5 m. How far is he from his original position and in which direction?

- (A) 10 m, North                      (B) 10 m, South                      (C) 10 m, West                      (D) 10 m, East

95. Introducing a girl, Vipin said, "Her mother is the only daughter of my mother-in-law." How is Vipin related to that girl?

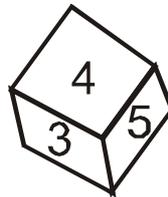
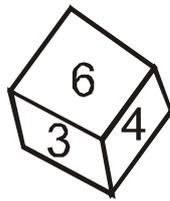
- (A) Uncle                      (B) Father                      (C) Brother                      (D) Husband

**DIRECTIONS : (96)** find the missing numbers :

96. 1, 8, 9, 64, 25, 216, ?, ?

- (A) 49, 64                      (B) 343, 64                      (C) 49, 512                      (D) 343, 512

97. On the basis of two figures of dice, you have to tell what number will be on the opposite face of number 5 ?



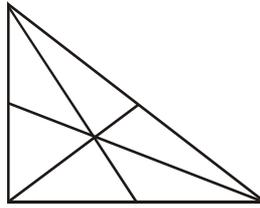
- (A) 1                      (B) 2                      (C) 4                      (D) 6

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Space for rough work

**DIRECTIONS :** How many triangles are there in the following figures ?

98.



(A) 10

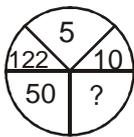
(B) 16

(C) 14

(D) 12

**DIRECTIONS :** (Q. No. 99) find the missing numbers :

99.



(A) 25

(B) 27

(C) 23

(D) 26

100. If '+' means 'x', '-' means '+', 'x' means ' $\div$ ', and ' $\div$ ' means '-', then

$$6 - 9 + 8 \times 3 \div 20 = ?$$

(A) -2

(B) 6

(C) 10

(D) 12

Space for rough work

## ANSWER - KEY

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### PART- A : PHYSICS

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 1. (A)  | 2. (C)  | 3. (A)  | 4. (A)  | 5. (C)  |
| 6. (D)  | 7. (D)  | 8. (B)  | 9. (A)  | 10. (D) |
| 11. (B) | 12. (D) | 13. (C) | 14. (A) | 15. (A) |
| 16. (D) | 17. (B) | 18. (D) | 19. (A) | 20. (A) |

### PART- B : CHEMISTRY

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 21. (D) | 22. (D) | 23. (C) | 24. (B) | 25. (A) |
| 26. (A) | 27. (D) | 28. (A) | 29. (C) | 30. (B) |
| 31. (B) | 32. (B) | 33. (A) | 34. (A) | 35. (A) |
| 36. (D) | 37. (B) | 38. (A) | 39. (A) | 40. (D) |

### PART- C : MATHEMATICS

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 41. (A) | 42. (C) | 43. (C) | 44. (D) | 45. (A) |
| 46. (B) | 47. (C) | 48. (A) | 49. (C) | 50. (B) |
| 51. (C) | 52. (C) | 53. (A) | 54. (B) | 55. (D) |
| 56. (B) | 57. (C) | 58. (A) | 59. (D) | 60. (D) |

### PART- D : BIOLOGY

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 61. (C) | 62. (C) | 63. (A) | 64. (D) | 65. (C) |
| 66. (B) | 67. (C) | 68. (C) | 69. (B) | 70. (C) |
| 71. (D) | 72. (C) | 73. (B) | 74. (D) | 75. (C) |
| 76. (D) | 77. (D) | 78. (A) | 79. (D) | 80. (D) |

### PART- E : MENTAL ABILITY

- |         |         |         |         |         |
|---------|---------|---------|---------|---------|
| 81. (A) | 82. (D) | 83. (B) | 84. (D) | 85. (D) |
| 86. (A) | 87. (A) | 88. (A) | 89. (C) | 90. (B) |
| 91. (B) | 92. (C) | 93. (A) | 94. (D) | 95. (B) |
| 96. (C) | 97. (D) | 98. (B) | 99. (D) | 100.(C) |