



Class – VII

ENTRANCE TEST CUM SCHOLARSHIP (SAMPLE PAPER-3)

[Time: 3 Hours]

[Max Marks: 450]

A.General:

- 1.This booklet is a Question Paper containing 150 questions.
- 2.Blank Papers, Clipboards, Log Tables, slide rules, calculators, cellular phones and electronic gadgets in any form are not allowed to be carried inside the examination hall.
- 3.The answer sheet, a machine-readable optical mark recognition sheet (OMR Sheet), is provided separately.
- 4.DO NOT TAMPER WITH THE OMR OR THE BOOKLET.
- 5.Please fill your roll number correctly in the OMR sheet (answer sheet).
- 6.Both Question Paper and OMR Answer Sheet will be submitted after completion of this examination.

B.Question Paper Format and marking scheme:

- 1.The Question Paper consists of five parts (Part I: MAT, Part II: Physics, Part III: Chemistry, Part IV: Biology, Part V: Mathematics).
- 2.Each Question carries +3 marks for correct answer and -1 mark for incorrect answer.

MAT

Directions : (Q. Nos. 1-2) In the following questions, there is an address which has been reproduced against (a), (b), (c) and (d), three of which have some mistakes or the other. The one without any mistake is your answer.

1. Mr. Ramachandran, 1068/90, A.F.O., Bangalore (Karnataka)
 - (a) Mr. Ramachandren, 1068/90, A.F.O. Bangalore (karnataka)
 - (b) Mr. Ramachandran, 106/8/90, A.F.O. Bangalor (Karnataka)
 - (c) Mr. Ramachandran, 1086/90, A.F.O. Banglore (Karnataka)
 - (d) Mr. Ramachandran, 1068/90, A.F.O. Bangalore (Karnataka)
2. Tarasankar Rastogi, A-22, Indrant Road, Sundargarh 436065
 - (a) Tarasankar Rastogi, A-22, Indranit Road, Sundargarh 436065
 - (b) Tarashankar Rastogi, A-22, Indrant Road, Sundargarh 436065
 - (c) Tarasankar Rastogi, A-22, Indrant Road, Sundarragarh 436065
 - (d) Tarasankar Rastogi, A-22, Indrant Road, Sundargarh 436065

Directions: (Q. Nos. 3-4). From amongst the given alternatives, select the one in which the set of numbers is most like the set of numbers given below:

3. (7, 12, 22, 37)
 - (a) 2, 7, 12, 32
 - (b) 3, 8, 18, 33
 - (c) 4, 8, 19, 34
 - (d) 8, 13, 22, 38
4. (10, 12, 15)
 - (a) (21, 23, 27)
 - (b) (30, 32, 36)
 - (c) (60, 62, 66)
 - (d) (68, 70, 73)

Directions : (Q. Nos. 5-7). Find the odd word/letter/numbers from the given responses.

5. (a) Yearly (b) Quickly (c) Weekly (d) Monthly
6. (a) EPH (b) FQI (c) HSK (d) KWO
7. (a) ECDBA (b) OMNLK (c) WUVTS (d) SQRPO
8. If GECA means 8642, then HFBD means
 - (a) 9735
 - (b) 7953
 - (c) 7935
 - (d) 5379
9. A man said to a lady, "Your mother's husband's sister is my aunt". How is the lady related to man?
 - (a) Sister
 - (b) Mother
 - (c) Daughter
 - (d) Grand daughter

Directions: (Q. Nos. 10-14) Read the following information carefully and answer the questions.

At a party A, B, C, D and E are sitting in a circle. The group comprises a professor, an industrialist and a businessman. The businessman is sitting in between the industrialist and his wife D. A, the professor is married to E, who is the sister of B. The industrialist is seated to the right of C. Both the ladies are unemployed.

10. What is A to B?
 - (a) Brother
 - (b) Uncle
 - (c) Brother-in-law
 - (d) Cannot be determined
11. A is sitting to the right of
 - (a) the industrialist
 - (b) his wife
 - (c) D
 - (d) Cannot be determined
12. Who is the industrialist?
 - (a) D
 - (b) A
 - (c) B
 - (d) Cannot be determined

13. Who is unmarried in the group?
 (a) Professor (b) Industrialist (c) Businessman (d) Cannot be determined

14. Who among them must be graduate ?
 (a) B (b) A (c) C (d) None of these

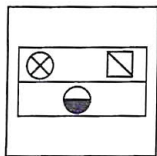
Directions: (Q. Nos. 15-18) Read the following information carefully and answer the questions.

Asha and Charu are good in Mathematics and Athletics. Deepa and Asha are good in Athletics and Studies, Charu and Beena are good in General Knowledge and Mathematics. Deepa, Beena and Ela are good in Studies and General Knowledge. Ela and Deepa are good in Studies and Art.

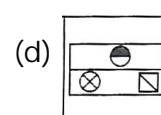
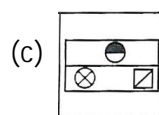
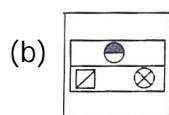
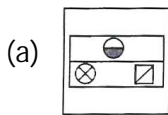
15. Who is good in Studies, General Knowledge, Athletics and Art?
 (a) Asha (b) Beena (c) Charu (d) Deepa
16. Who is good in Studies, General Knowledge and Mathematics?
 (a) Asha (b) Beena (c) Charu (d) Ela
17. Who is good in Studies, Mathematics and Athletics?
 (a) Asha (b) Beena (c) Charu (d) Deepa
18. Who is good in Athletics, General Knowledge and Mathematics?
 (a) Asha (b) Beena (c) Charu (d) Deepa
19. Dhaka : Bangladesh :: Lira : ?
 (a) South Korea (b) Nepal (c) Italy (d) North Korea
20. Yogeshwar Dutt : Wrestling :: Saina Nehwal : ?
 (a) Badminton (b) Chess (c) Table Tennis (d) Football

Directions (21-23) : In each of the following questions, choose the correct water image for the figure 'X'.

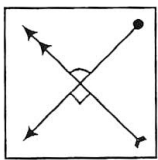
21. Problem Figure



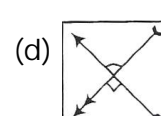
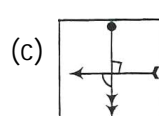
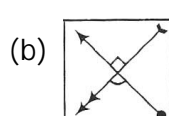
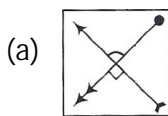
X



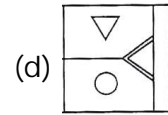
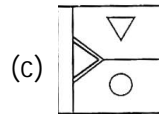
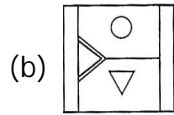
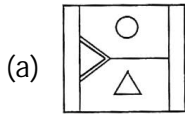
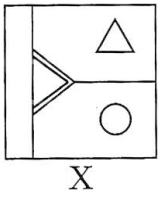
22. Problem Figure



X

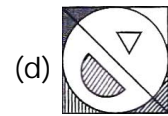
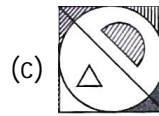
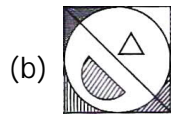
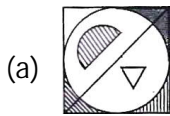
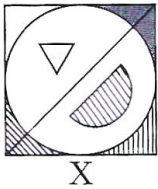


23. Problem Figure

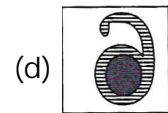
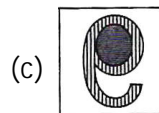
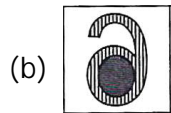
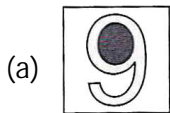
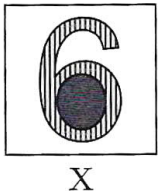


Directions (24-26) : In each of the following questions, choose the correct mirror image for the figure 'X'.

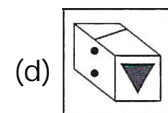
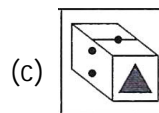
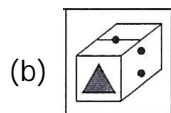
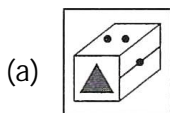
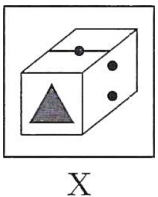
24. Problem Figure



25. Problem Figure

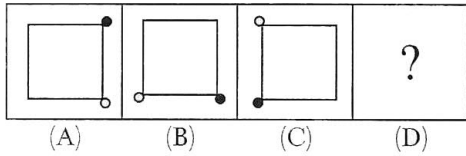


26. Problem Figure

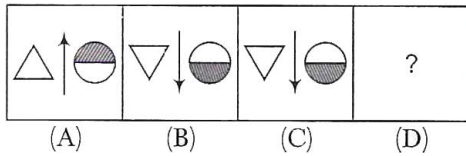


Directions (27-28) : Select the figure from option figures which will continue the same series as given in the problem figures.

27. Problem Figure

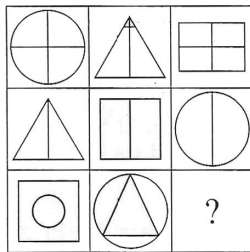


28. Problem Figure

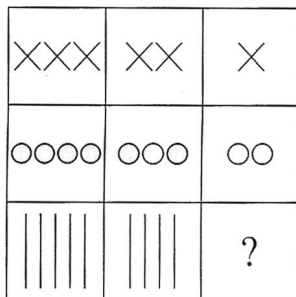


Directions (29-31) : In each of the following questions, find out which of the answer figure is complete is the figure matrix?

29. Problem Figures

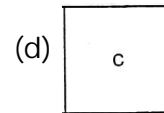
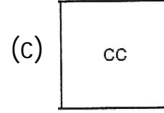
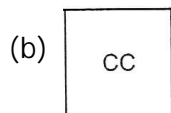
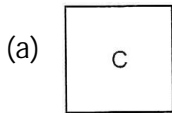


30. Problem Figures



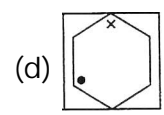
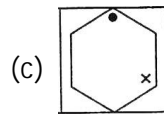
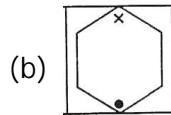
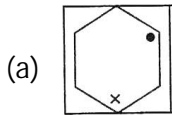
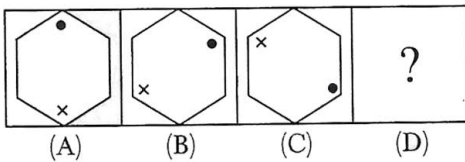
31. Problem Figures

AA	BB	CC
Aa	Bb	Cc
aa	bb	?

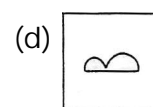
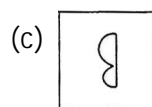
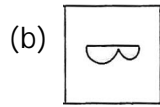
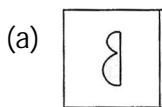
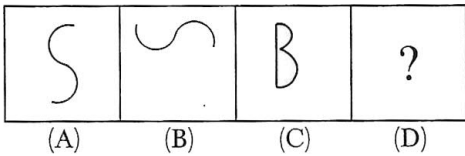


Directions (32-33) : As per given relationship between figure (A) and (B), find the figure which establish a similar relationship between (C) and (D).

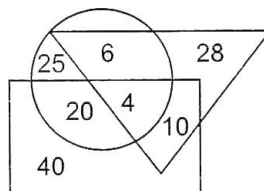
32. Problem Figures



33. Problem Figures



Directions (34-35) : On the basis of the following Venn-diagram, answer the questions given below. The rectangle represents artists, the circle represents player and the triangle represents doctors,



34. How many artists are players but not doctors?

(a) 25

(b) 20

(c) 10

(d) 30

35. How many artists are neither player nor doctor?

(a) 40

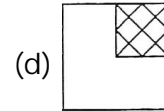
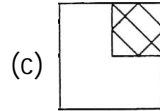
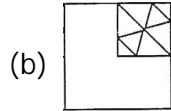
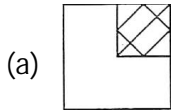
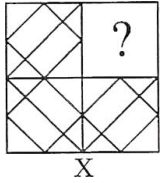
(b) 10

(c) 30

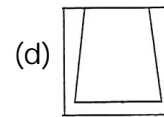
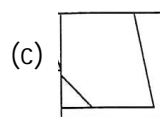
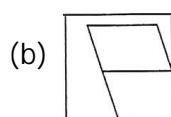
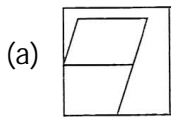
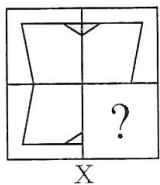
(d) 25

Directions (36-38) : From the given alternatives, complete the problem figure.

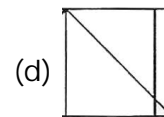
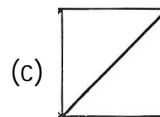
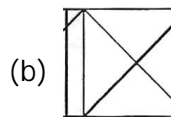
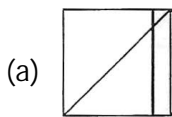
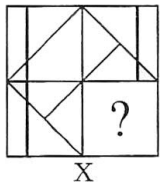
36. Problem Figure



37. Problem Figure

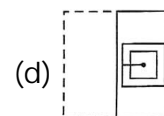
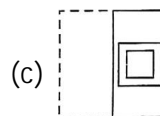
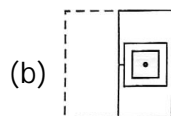
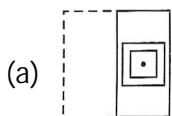
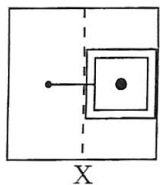


38. Problem Figure

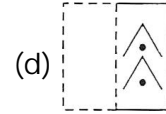
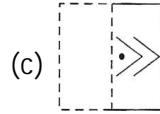
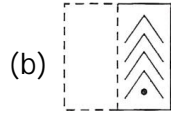
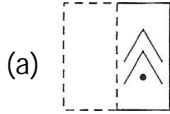
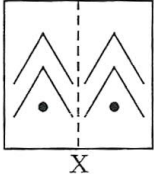


Directions (39-41) : Find which of the alternative from the answer figures will follow, if the problem figure is folded in a certain defined pattern along the dotted line?

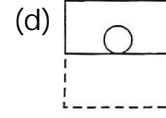
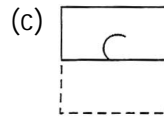
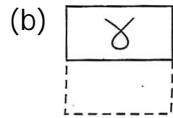
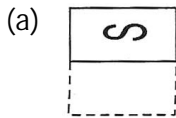
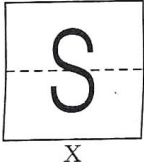
39. Problem Figure



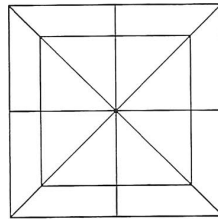
40. Problem Figure



41. Problem Figure



42. How many squares does the following figure contain?



(a) 15

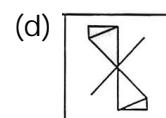
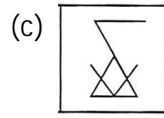
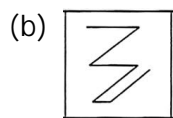
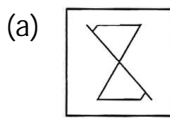
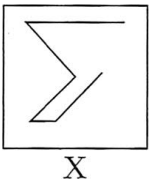
(b) 10

(c) 21

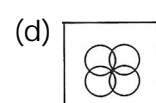
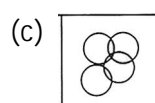
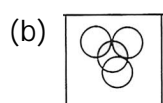
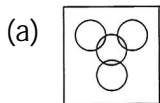
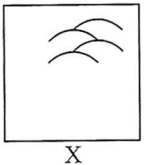
(d) 12

Directions (43-46) : Figure (X) is embedded in which of the following option figures :

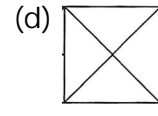
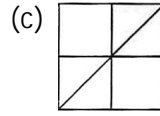
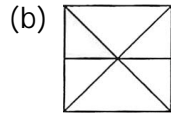
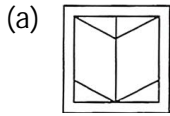
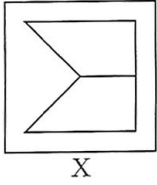
43. Problem Figures



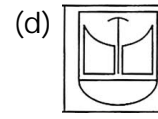
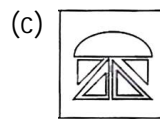
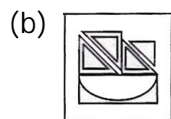
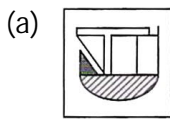
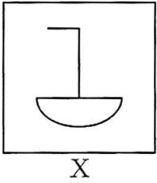
44. Problem Figures



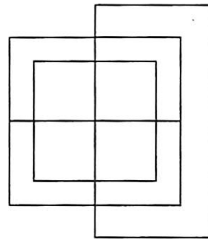
45. Problem Figures



46. Problem Figures



47. What is the number of straight lines in the following figure?



(a) 13

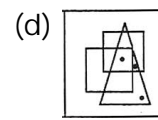
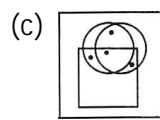
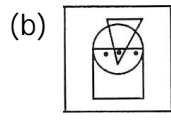
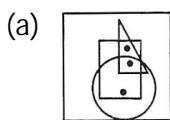
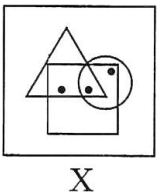
(b) 15

(c) 17

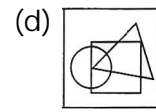
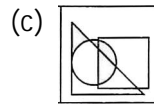
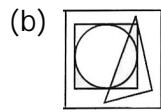
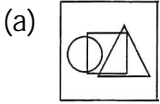
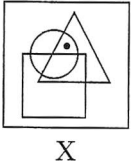
(d) 19

Directions (48-51) : In each of the following questions, there is a diagram(X) in which one or more points have been placed in certain positions. Examine the placement of these points carefully. From the four choices, select the one in which the placement of points is similar to that in the diagram.

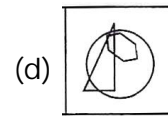
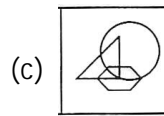
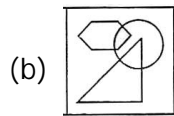
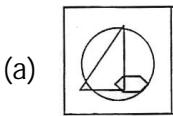
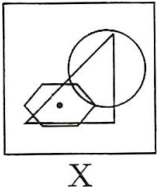
48. Problem Figure



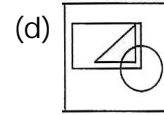
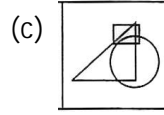
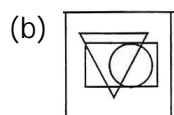
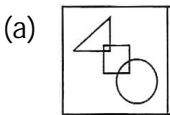
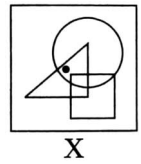
49. Problem Figure



50. Problem Figure

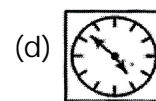
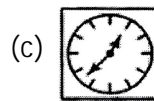
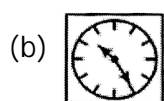
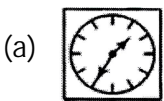
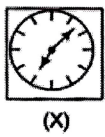


51. Problem Figure

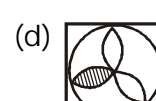
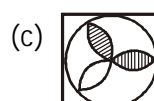
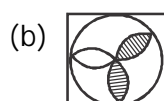
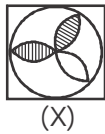


Directions (52-56) : In each of the following questions, choose the correct mirror-image of the figure (X) from amongst four alternatives (a), (b), (c) and (d), given along with it.

52.



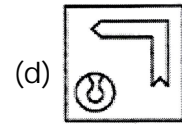
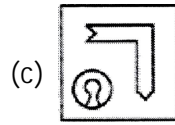
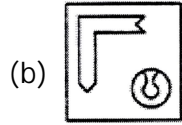
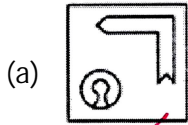
53.



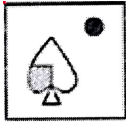
54.



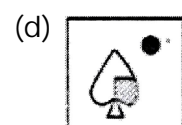
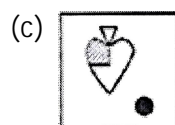
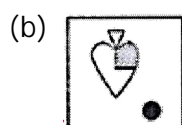
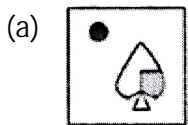
(X)



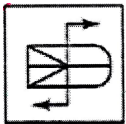
55.



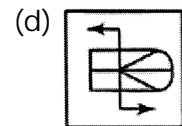
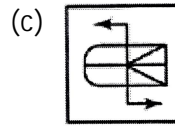
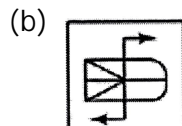
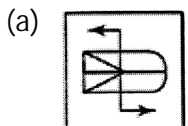
(X)



56.

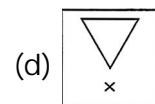
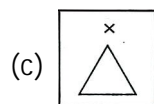
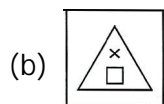
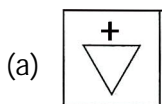
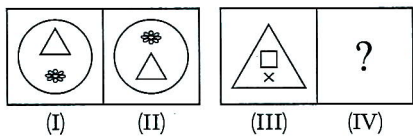


(X)

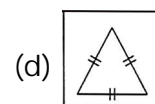
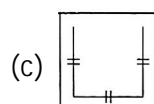
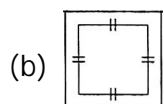
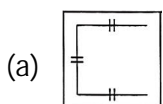
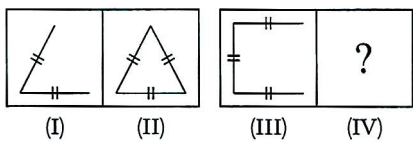


Directions (57-59) : In the following questions, find out the same relationship between (III) and (IV) as given between (I) and (II)

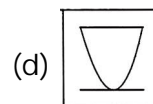
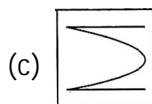
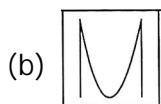
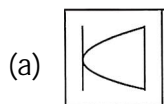
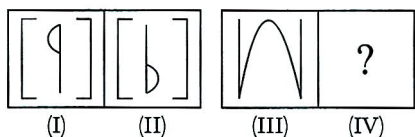
57. Problem Figures



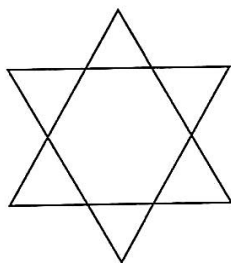
58. Problem Figures



59. Problem Figures



60. How many triangles are there in the following figure?



(a) 7

(b) 8

(c) 9

(d) 10

PHYSICS

61. S.I unit of temperature is :

(a) Kelvin

(b) Celsius

(c) Fahrenheit

(d) Reaumur

62. 1 calorie = _____

(a) 1.8 J

(b) 2.4 J

(c) 4.2 J

(d) 5.1 J

63. Temperature is a _____ quantity.

(a) Vector

(b) Scalar

(c) Both (a) and (b)

(d) Neither of (a) and (b)

64. Thermometer works on the principle of:

(a) Substances expand on heating

(b) Substances contract on heating

(c) Substances have no effect on heating

(d) None of these

65. The following one determines the direction of flow of heat:

(a) Temperature

(b) Thermometer

(c) Altimeter

(d) Ammeter

66. Unit(s) of energy is:

(a) Joule

(b) Calorie

(c) Kelvin

(d) Both (a) and (b)

67. A horse runs a distance of 1200 m in 3 min and 20 s. The speed of the horse is _____.

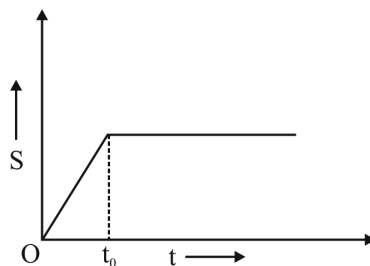
(a) 60 ms⁻¹

(b) 65 ms⁻¹

(c) 40 ms⁻¹

(d) 6 ms⁻¹

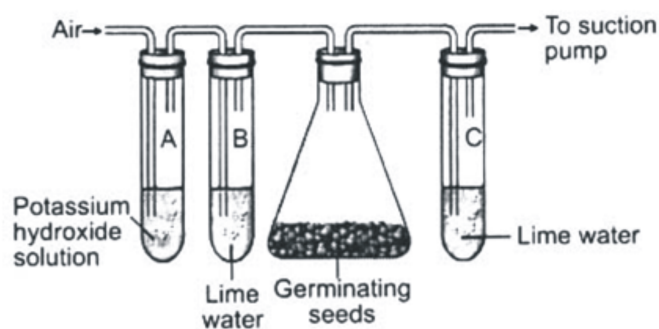
68. When a body covers first one third distance with speed 1 m/s, the second one third distance with speed 2 m/s and the last one third distance with speed 3 m/s, then the average speed is____.
- (a) 2 m/s (b) 1.79 m/s (c) 2.66 m/s (d) 1.64 m/s
69. An image that cannot be obtained on a screen is:
- (a) Real image (b) Bright image (c) Faint image (d) Virtual image
70. A ray of light incident on a shining surface bend back into the same medium. The phenomenon is called:
- (a) Refraction (b) Reflection (c) Dispersion (d) Diffraction
71. A man is standing at a distance of 1 m from a plane mirror. He moves 1 m away from the mirror. The separation between him and his image is:
- (a) 1 m (b) 2 m (c) 3 m (d) 4 m
72. Displacement is:
- (a) Vector quantity (b) Scalar quantity
(c) Either vector quantity or scalar quantity (d) Neither vector quantity nor scalar quantity
73. The train 'A' travelled a distance of 120 km in 3 h whereas another train 'B' travelled a distance of 180 km in 4 h. Which train travelled faster?
- (a) Train A (b) Train B
(c) Both are equally faster (d) None of these
74. A cyclist moves from a certain point X and completes one revolution around a circular path of radius 'r'. The distance travelled and magnitude of displacement of the cyclist are respectively:
- (a) $2r, \pi r$ (b) $\frac{\pi r}{2}, 2\pi r$ (c) $2\pi r, \text{zero}$ (d) $r, 2r$
75. Figure shows the displacement (s) - time (t) graph of a particle moving on the X-axis. Which of the following options is correct?



- (a) The particle is at rest.
- (b) The velocity of particle increases up to time t_0 and then becomes constant.
- (c) The speed of particle increases up to time t_0 and then becomes constant.
- (d) The particle moves at a constant velocity up to a time t_0 , and then stops.

CHEMISTRY

86. Animal fibres are made up of :
(a) cellulose (b) protein (c) nylon (d) rayon
87. The smallest unit present in cotton is :
(a) cellulose (b) protein (c) amino acids (d) dacron
88. Which of the following statements is NOT true?
(a) Workers in wool industry generally suffer from sorter's disease.
(b) Bakharwal is an Indian breed of sheep.
(c) Rayon is a natural fibre.
(d) Shearing is usually done in summer season.
89. The process of seeping of water into the ground is called _____.
(a) Evaporation (b) Infiltration (c) Transpiration (d) None of these
90. X is present in the stomach. However, presence of excess of it causes indigestion, which requires the intake of milk of magnesia to undo the effect of X. What is X?
(a) HCl (b) H_2SO_4 (c) NaOH (d) KOH
91. Study the given set up of an experiment. You will observe that :



- (a) Lime water in test tube B turns milky.
(b) Lime water in test tube C turns milky.
(c) Potassium hydroxide solution in test tube A turns red.
(d) Temperature in the flask will go down.
92. Which of the following colours is given by phenolphthalein in a basic salt solution?
(a) Yellow (b) Pink (c) Orange red (d) Colourless
93. Chemical name of Oil of Vitriol is _____.
(a) Nitric acid (b) Acetic acid (c) Sulphuric acid (d) Sodium hydroxide
94. The most commonly used natural indicator 'Litmus' is extracted from :
(a) Lichens (b) Turmeric (c) Beet Root (d) China rose
95. Substances which are bitter in taste, feel soapy on touching are known as:
(a) Acids (b) Bases (c) Indicators (d) Neutral solution
96. Vitamin C is also known as :
(a) oxalic acid (b) ascorbic acid (c) tartaric acid (d) lactic acid

97. The correct way of making a dilute solution of an acid is to :
 (a) add water to acid. (b) add acid to water.
 (c) mix acid and water simultaneously. (d) add water to acid in a shallow container.
98. Which of the following set of substances contain acids?
 (a) grapes, lime water (b) vinegar, soap
 (c) curd, milk of magnesia (d) curd, vinegar
99. On which of the following day is world water day observed?
 (a) 22 March (b) 14 November (c) 2 October (d) 21 December
100. Salt used in purification of water is :
 (a) potash alum (b) epsom salt (c) green vitriol (d) blue vitriol

101. Match the entries given in column A with the appropriate ones in column B.

Column A	Column B
(p) Sodium dihydrogenphosphate	(i) Basic salt
(q) Calcium hydroxychloride	(ii) Gun powder
(r) Nitre	(iii) Manufacture of glass
(s) Ammonium carbonate	(iv) Acidic salt
	(v) Smelling salt

- (a) p-iv, q-i, r-ii,iii, s-v (b) p-iv, q-i,v, r-ii,iii, s-v
 (c) p-iv, q-v, r-ii,iii, s-i (d) p-i, q-iv, r-ii,iii, s-v
102. Generally, pickles are stored in :
 (a) tin vessels or glass vessels. (b) tin vessels or plastic vessels.
 (c) glass vessels or plastic vessels. (d) aluminium vessels or tin vessels.
103. The pair of ions which does not cause hardness of water is :
 (a) sulphate, chloride (b) bicarbonate, chloride
 (c) bicarbonate, sulphate (d) nitrate, phosphate
104. On passing electricity through acidulated water, the gaseous products obtained are collected in two separate test tubes A and B. The volume of the gas collected in test tube A is double the volume of gas collected in test tube B. Identify the two gases in test tube A and B respectively.
 (a) Hydrogen and oxygen (b) Oxygen and hydrogen
 (c) Hydrogen peroxide and oxygen (d) Oxygen and water vapour
105. Silk moth feeds on which plant leaves?
 (a) Eucalyptus leaves (b) Grape leaves (c) Mulberry leaves (d) Neem leaves
106. You do not get hurt when you get a haircut. Which of the following reasons is/are correct about the given statement?
 (a) Hair is a good conductor of heat.
 (b) The roots of hair do not have sensory cells.
 (c) The upper layer of the skin with hair is dead.
 (d) All of these

107. Salt solutions are good conductors of electricity. This is due to the presence of _____ in solution state.
- (a) mobile electrons (b) mobile ions
(c) molecules (d) both (a) and (b)
108. The basicity of an acid is defined as :
- (a) the number of replaceable OH⁻ ions.
(b) the number of H⁺ ions that can be formed from the acid.
(c) the power of the acid to form salts.
(d) none of these.
109. Two persons A and B got burns, one with boiling water at 100°C and other due to steam at 100°C respectively. Which person is affected more?
- (a) A (b) B
(c) Both A and B to the same extent (d) None of the above
110. Which of the following fibres have the physical properties given below?
- (i) Smooth to touch
(ii) High tensile strength
(iii) Absorbs 1/3 of its weight of water
- (a) Cotton (b) Silk (c) Woollen (d) Rayon

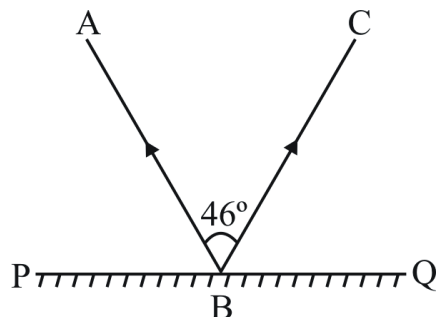
BIOLOGY

111. Which of the following organisms feed on dead and decaying matter?
- (a) Cuscuta (b) Fungi (c) Green plants (d) Both (a) and (b)
112. During exhalation:
- (a) diaphragm contracts (b) diaphragm relaxes
(c) rib cage moves upward and outward (d) None of these
113. The balanced chemical equation of photosynthesis is :
- (a) $6\text{CO}_2 + 6\text{H}_2\text{O} \xrightarrow[\text{chlorophyll}]{\text{sunlight}} \text{C}_6\text{H}_{12}\text{O}_6 + 12\text{H}_2\text{O} + \text{O}_2$
- (b) $6\text{CO}_2 + 12\text{H}_2\text{O} \xrightarrow[\text{chlorophyll}]{\text{sunlight}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 + 6\text{H}_2\text{O}$
- (c) $\text{CO}_2 + \text{H}_2\text{O} \xrightarrow[\text{chlorophyll}]{\text{sunlight}} \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 + \text{H}_2\text{O}$
- (d) $12\text{CO}_2 + 6\text{H}_2\text{O} \xrightarrow[\text{chlorophyll}]{\text{sunlight}} 12\text{C}_6\text{H}_{12}\text{O}_6 + 12\text{O}_2 + 12\text{H}_2\text{O}$
114. A place receives very little rainfall and the temperature is high throughout the year. The climate of that place will be _____ and _____.
- (a) hot, dry (b) hot, humid (c) cold, dry (d) cold, humid

115. Which of the following is not an adaptation in elephants?
- (a) They have trunks which they use as nose and for lifting the food.
 (b) They have very long ears.
 (c) They have long tail, strong claws.
 (d) None of these
116. Emulsification of fats is the function of:
- (a) bile salts (b) pancreatic juice (c) intestinal juice (d) None of these
117. The process of conversion of glucose to pyruvate during cellular respiration occurs in :
- (a) Mitochondria (b) Cytoplasm (c) Golgi body (d) Lysosome
118. Carbon dioxide combines with haemoglobin to form a product called as :
- (a) Carbamino haemoglobin (b) Oxyhaemoglobin
 (c) Carboxyhaemoglobin (d) None of these
119. Role of chlorophyll during photosynthesis is:
- (a) absorption of solar energy (b) synthesis of glucose
 (c) synthesis of oxygen (d) Both (a) and (c)
120. The air entering the human body gets filtered by:
- (a) fine hair and mucus in the nostrils (b) mucus in the lungs
 (c) chemicals present in the trachea (d) both (a) and (b)

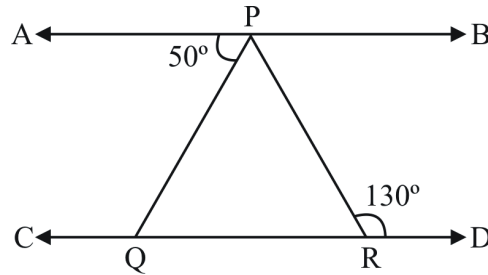
MATHEMATICS

121. Which of the following does not represent pair of integer (a, b) such that $a \div b = 2$?
- (a) (-6, -3) (b) (-2, 1) (c) (-10, -5) (d) (8, 4)
122. If $x : y = 5 : 2$ then $(8x + 9y) : (8x + 2y)$ is :
- (a) 22 : 29 (b) 26 : 61 (c) 29 : 22 (d) 61 : 26
123. Which integer should be added to -5 to get 4?
- (a) 1 (b) -1 (c) -9 (d) 9
124. In the given figure PQ is a mirror, AB is the incident ray and BC is the reflected ray. $\angle ABC = 46^\circ$ then $\angle ABP$ is equal to :



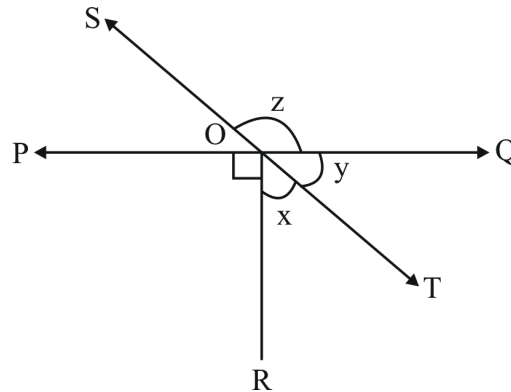
- (a) 44° (b) 67° (c) 13° (d) 62°

125. $AB \parallel CD$, $\angle APQ = 50^\circ$ and $\angle PRD = 130^\circ$ then $\angle QPR$ is :



- (a) 130° (b) 50° (c) 80° (d) 30°

126. In fig. line PQ and ST intersect at O if $\angle POR = 90^\circ$ and $x : y = 3 : 2$, then z is equal to :



- (a) 126° (b) 144° (c) 136° (d) 154°

127. If two supplementary angles are in the ratio 1: 2 then the bigger angle is:

- (a) 120° (b) 125° (c) 110° (d) 90°

128. The points P, Q, R and S lie on a straight line. The ratio of the length of PQ to the length of QR is 3 : 4 and the ratio of the length of PR to the length of RS is 2 : 1. Find the ratio of the length of QR to the length of PS.

- (a) 7 : 19 (b) 10 : 21 (c) 21 : 8 (d) 8 : 21

129. Sonu's grandmother is 80 years old and sonu is 20 years old. How many years ago was his grandmother 7 times as old as Sonu?

- (a) 8 years (b) 10 years (c) 12 years (d) 15 years

130. The sum of two rational numbers is -7 . If one of the numbers is $-\frac{15}{19}$, the other number is:

- (a) $-\frac{21}{10}$ (b) $-\frac{57}{16}$ (c) $\frac{7}{9}$ (d) $-\frac{118}{19}$

131. In a school, only 2 out of 5 students can participate in a quiz. What is the chance that a student picked at random makes it to the competition?

- (a) 20% (b) 40% (c) 50% (d) 30%

132. What should be added to $\left(\frac{1}{2} + \frac{1}{3} + \frac{1}{5}\right)$ to get 3?

- (a) $\frac{58}{30}$ (b) $\frac{59}{32}$ (c) $\frac{59}{30}$ (d) $\frac{59}{95}$

133. Let x, y, z be three observations. The mean of these observations is :

- (a) $\frac{x \times y \times z}{3}$ (b) $\frac{x + y + z}{3}$ (c) $\frac{x - y - z}{3}$ (d) $\frac{x \times y + z}{3}$

134. In $\triangle ABC$, $\angle C = \angle A$ and $BC = 6$ cm and $AC = 5$ cm then the length of AB is :

- (a) 6 cm (b) 5 cm (c) 3 cm (d) 2.5 cm

135. If one angle of a triangle is equal to the sum of other two angles, then the triangle is:

- (a) an isosceles triangle (b) an obtuse triangle
(c) an equilateral triangle (d) a right angled triangle.

136. Two altitudes intersect at a vertex in

- (a) Obtuse triangle (b) Acute triangle (c) Right triangle (d) None of these

137. The sum of two consecutive multiples of 6 is 66. Find the multiple.

- (a) 32, 34 (b) 34, 42 (c) 30, 30 (d) none of these

138. If I add $\frac{3}{8}$ th of number to $\frac{1}{8}$ th of that number I get zero, then the number is :

- (a) 0 (b) 3 (c) -3 (d) none of these

139. A number increased by 20 and then reduced by 15 becomes 10, then the number is :

- (a) 2 (b) 5 (c) 6 (d) 7

140. The result of adding the difference of 3.003 and 2.05 to their sum will be :

- (a) 6.006 (b) 60.06 (c) 600.6 (d) 0.6060

141. The number 'x' equals one fourth of its own reciprocal, then the value of 'x' is equal to :

- (a) $\frac{1}{2}$ (b) $\frac{1}{4}$ (c) 2 (d) 4

142. What is the median of the following data 37, 31, 42, 43, 46, 25, 39, 45, 32?

- (a) 35 (b) 39 (c) 5 (d) 8

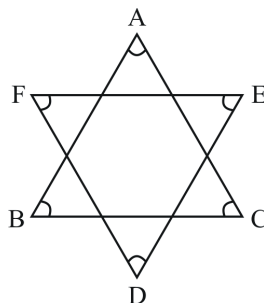
143. A man goes 24 m due East and then 10 m due North. How far is he from his initial position?

- (a) 25 m (b) 25.5 m (c) 26 m (d) 27 m

144. Which of the following values are equal?

- (P) 1^4 (Q) 4^0 (R) 0^4 (S) 4^1
(a) P and Q (b) Q and R (c) P and R (d) P and S

145. The value of $\angle A + \angle B + \angle C + \angle D + \angle E + \angle F$ is :



- (a) 190° (b) 540° (c) 360° (d) 180°

146. If the distance travelled by a car in one hour is 210 km, then find the distance (in metres) travelled by the same car with the same speed in 60 seconds.
- (a) 4500 m (b) 3160 m (c) 3500 m (d) 4230 m
147. In ΔPQR if $\angle P = 60^\circ$ and $\angle Q = 40^\circ$, then the exterior angle formed by producing QR is equal to:
- (a) 60° (b) 120° (c) 100° (d) 80°
148. Which of the following does not have an integer solution?
- (a) $5y - 3 = -18$ (b) $3x - 9 = 0$ (c) $3z + 8 = 3 + z$ (d) $9y + 8 = 4y - 7$
149. Which of the following rational number is equal to its reciprocal?
- (a) 0 (b) 2 (c) 1 (d) $\frac{1}{2}$
150. The range of the data 21, 6, 17, 18, 12, 8, 4, 13 is:
- (a) 17 (b) 12 (c) 8 (d) 15

ROUGH WORK
