



## SAMPLE TEST PAPER

(FOR STUDENTS MOVING FROM CLASS 7<sup>th</sup> TO 8<sup>th</sup>)

Time : 2 Hours

Maximum Marks : 240

Please read the instructions carefully. You are allotted 5 minutes specially for this purpose.

### INSTRUCTIONS

**A. General :**

1. This booklet is your Question paper containing 60 questions.
2. Blank papers, log tables, slide rules any electronic items like calculators, cellular phones, pagers, etc. are not allowed inside the examination hall.
3. A machine-readable Objective Response Sheet (ORS), is provided separately for answering the questions.
4. Write your **Name** and **Roll No.** in the boxes provided below on this page.

**B. Question paper format**

This paper consists of 3 Parts I, II & III.

- Part - I has 25 questions on Science
- Part - II has 20 questions on Mathematics
- Part - III has 15 questions on Logical Aptitude.

**C. Marking scheme :**

All are multiple choice questions with only one correct answer. **Each correct answer carries +4 marks and each wrong answer will get -1 mark.**

**D. Filling the ORS:**

1. Write all the information (Roll No., Test ID, Name, Mobile Nos., Center, Class, Set, Test date) given in the upper rectangle of the ORS, carefully using black/blue pen & do not write these anywhere else.
2. For each question, darken the correct choice in the ORS. Using **black/blue pen** for example, if the correct choice 'B' then marks as shown below.  

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. If more than one circles is darkened, it will be considered incorrect. Do not use white fluid, eraser etc. to change the answer.

**E.** For your rough work use the rough space provided inside this booklet.

**F.** Before handing over the ORS (answer sheet) to the invigilator present in the Examination Room/Hall, ensure that all the entries made on the ORS are correct. Nothing should be entertained once the ORS is handed over to the invigilator.

**G.** Students using any unfair means or involving himself/her self in any act of indiscipline will be barred from taking the examination.

Name of the candidate

Roll No.

T R C A T | | | | |

I have read all the instructions and shall abide by them

I have verified all the information filled in by the Candidate

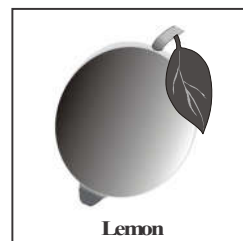
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Signature of the Candidate

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Signature of Invigilator

## PART - I

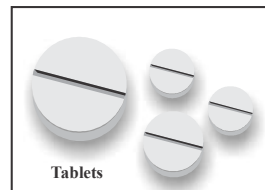
### SCIENCE

1. Which of the following units of length has smallest magnitude :  
(a) 1 metre                      (b) 1 centimetre                      (c) 1 kilometre                      (d) 1 milimetre
2. Objects that emit light on their own are called \_\_\_\_\_.  
(a) light bodies                      (b) Opaque                      (c) luminous                      (d) Non-luminous
3. Image formed in pin hole camera is  
(a) Inverted                      (b) Erect                      (c) Virtual                      (d) None of these
4. Material which allow current to pass through them easily are called :  
(a) Insulator                      (b) Conductor                      (c) Switch                      (d) Battery
5. An electric cell has \_\_\_\_\_ terminals.  
(a) One                      (b) Two                      (c) Three                      (d) Four
6. SI unit of speed is :  
(a) km/min                      (b) m/min                      (c) km/h                      (d) m/s
7. Metallic ball in pendulum is called as :  
(a) gong                      (b) Bob                      (c) Fork                      (d) Rod
8. Which of the following is essential element in electric circuit :  
(a) Switch                      (b) Connecting wires                      (c) Voltmeter                      (d) Ammeter
9. The magnetic effect of current was discovered by \_\_\_\_\_.  
(a) Newton                      (b) Joule                      (c) Oersted                      (d) Ohm
10. Images that can't be captured on screen are called \_\_\_\_\_.  
(a) Real images                      (b) Virtual images                      (c) Inverted images                      (d) Erect images
11. The "acids" are the substance which are sour in taste; as lemon is sour in taste, which acid is present in lemon :  
(a) Tannic Acid  
(b) Tartatic Acid  
(c) Citric Acid  
(d) Carbonic Acid



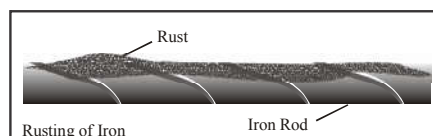
12. A substance which is used to relieve the pain in stomach due to acidity is termed as :

- (a) Antbase                      (b) Antacid  
(c) Acid                            (d) Salt



13. Rusting of iron is a type of corrosion which destroys the surface of iron completely so rusting of iron is a :

- (a) Physical change only  
(b) Physical & Chemical change  
(c) Chemical change only  
(d) None of these



14. The symbol "Ca" is used as a chemical symbol of which of the following elements :

- (a) Carbon                      (b) Cadmium                      (c) Cobalt                      (d) Calcium

15. When two or more elements combine in a definite proportion by mass and form a new substance, for example :-  $2H + \frac{1}{2}O_2 \rightarrow H_2O$ , the obtained substance is known as :

- (a) Atom                      (b) Compound                      (c) Molecule                      (d) None of these

16. Natural fibres are obtained from plants or animals. These fibres are biodegradable. Which of the following natural fibres are example of animal fibres :

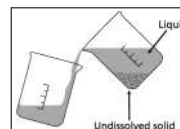
- (a) Cotton                      (b) Silk                      (c) Flax                      (d) Jute

17. Insoluble solid particles from the mixture of solid and liquid are separated by the method of :

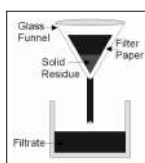
(a) Condensation



(b) Decantation



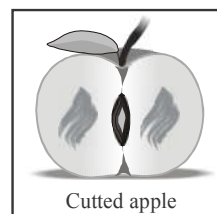
(c) Filtration



(d) None of these

18. The Brown colour of the apple after cutting is a :

- (a) Physical change  
(b) Chemical change  
(c) Biological change  
(d) No change

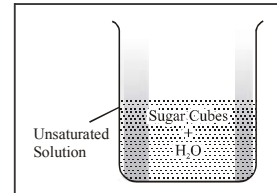


19. In the process of changing fibre into fabric, following process shows the conversion of “fibre into yarn” :

- (a) Weaving                      (b) Knitting                      (c) Spinning                      (d) None of these

20. A solution is said to be unsaturated :

- (a) When more substance can be added to it  
(b) When no more substance can be added to it  
(c) When it gets solidified  
(d) None of these.



21. During the formation of rain, when water vapour changes back to liquid in the form of rain drops

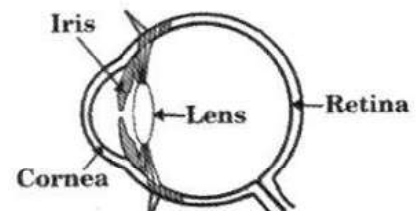
- (a) Heat is absorbed  
(b) Heat is released  
(c) Heat is first absorbed and then released  
(d) There is no exchange of heat

22. Which of the following correctly defines pollination ?

- (a) Shedding of pollen from anthers  
(b) Similar to fertilization of animals  
(c) Transfer of pollen from anthers to stigma  
(d) Transfer of pollen from anthers to ovule

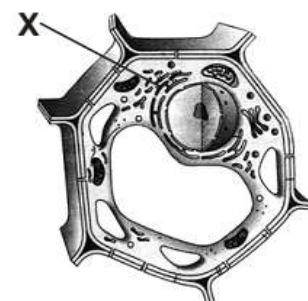
23. Observe the given figure. Which part in the human eye senses the images of various objects in the surroundings ?

- (a) Iris                                      (b) Cornea  
(c) Lens                                      (d) Retina



24. Which of the following functions is performed by the part marked 'X' in the given figure of plant cell?

- (a) Manufacture of lipids and fats  
(b) Manufacture of proteins  
(c) Manufacture of ATP  
(d) None of these



25. Match column I with column II and select the correct option from the codes given below:

**Column I**

- (A) Leeuwenhoek
- (B) Robert Brown
- (C) Robert Hooke
- (D) Purkinje
- (E) Knoll and Ruska

**Column II**

- (i) Bacteria
- (ii) Cell
- (iii) Nucleus
- (iv) Electron microscope
- (v) Protoplasm

(a) (A) (i), (B) (iii), (C) (ii), (D) (iv), (E) (v)

(b) (A) (i), (B) (iii), (C) (ii), (D) (v), (E) (iv)

(c) (A) (iv), (B) (ii), (C) (i), (D) (v), (E) (iii)

(d) (A) (i), (B) (ii), (C) (iii), (D) (iv), (E) (v)

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**SPACE FOR ROUGH WORK**

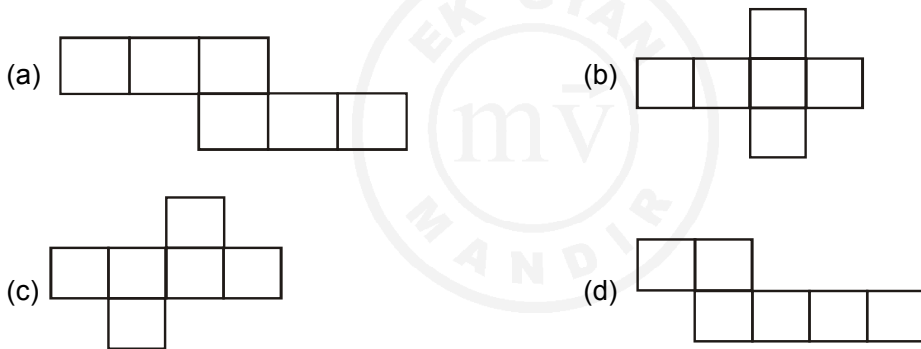


## PART - II

### MATHEMATICS

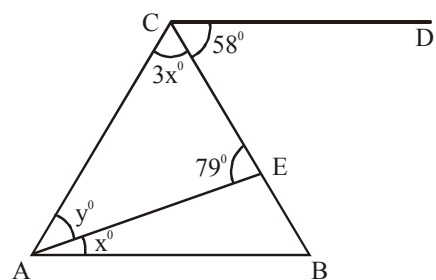
26. Which one of the following is true ?
- (a)  $\frac{1}{2} < \frac{9}{13} < \frac{3}{4} < \frac{12}{17}$     (b)  $\frac{3}{4} < \frac{9}{13} < \frac{1}{2} < \frac{12}{17}$     (c)  $\frac{1}{2} < \frac{3}{4} < \frac{9}{13} < \frac{12}{17}$     (d)  $\frac{1}{2} < \frac{9}{13} < \frac{12}{17} < \frac{3}{4}$
27. The product of  $3\frac{1}{7} \times 1\frac{5}{6} \times 1\frac{2}{5} \times 1\frac{1}{11}$  is equals to :
- (a)  $5\frac{8}{5}$     (b)  $5\frac{4}{5}$     (c)  $8\frac{4}{5}$     (d)  $7\frac{4}{5}$
28. If  $\left(\frac{125}{8}\right)^n \times \left(\frac{8}{125}\right)^{-5} = \left(\frac{5}{2}\right)^{18}$ , then  $n$  equals to :
- (a) 1    (b) 2    (c) 3    (d) None of these
29. If  $x$  is a positive integer, then
- (a)  $x + |x| = 0$     (b)  $x - |x| = 0$     (c)  $x + |x| = -2x$     (d)  $x - |x| = -2x$
30.  $\left\{(33)^2 - (31)^2\right\}^{5/7} =$
- (a) 64    (b) 16    (c) 32    (d) 4
31. How much is  $-2x^2 + x + 1$  less than  $x^2 + 2x - 3$  ?
- (a)  $-x^2 + 3x - 2$     (b)  $3x^2 + x - 4$     (c)  $-3x^2 - x + 4$     (d)  $3x^2 + 3x - 4$
32. The value of  $85 - [12x - 7(8x - 3) - 2\{10x - 5(2 - 4x)\}]$  is :
- (a)  $24 + 76x$     (b)  $34 + 88x$     (c)  $44 + 104x$     (d) None of these
33. A sum of ₹ 8400 is made up of 50, 20, 10 and 5 rupee notes. The number of 10 rupee notes is five times the number of 5 rupee notes, four times the number of 20 rupee notes and ten times the number of 50 rupee notes. What is the number of 50 rupee notes in the denomination ?
- (a) 20    (b) 40    (c) 15    (d) None of these
34. The ages of Rakesh and Sarita are in the ratio 3 : 8. Six years hence, their ages will be in the ratio 4 : 9. The present age of Rakesh is :
- (a) 18 years    (b) 15 years    (c) 12 years    (d) 21 years

35. 8 men can finish a piece of work in 40 days. If 2 more men join them, the work will be completed in :
- (a) 30 days                      (b) 32 days                      (c) 36 days                      (d) 50 days
36. If 35% of a number added to 39 is the number itself, the number is :
- (a) 60                              (b) 65                              (c) 75                              (d) 105
37. If the cost price of 15 pens is equal to the selling price of 20 pens, then the loss percentages is:
- (a) 25%                              (b) 20%                              (c) 15%                              (d) 33%
38. On selling an article for ₹ 144 a man loses 10%. At what price should he sell it to gain 10% ?
- (a) ₹ 158.40                      (b) ₹ 172.80                      (c) ₹ 176                              (d) ₹ 192
39. a, b and c are three sums of money such that b is the simple interest on a and c is the simple interest on b for the same time and same rate Which is the following is correct ?
- (a)  $abc = 1$                       (b)  $c^2 = ab$                       (c)  $b^2 = ac$                       (d)  $a^2 = bc$
40. Identify the net which can not be used to make a cube by folding :

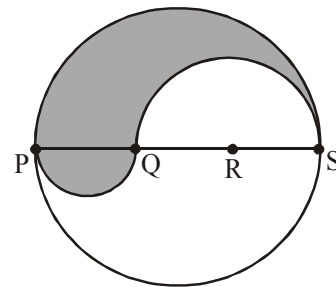


41. A ladder 15 m long reaches a window which is 9 m above the ground on one side of a street. Keeping its foot at the same point, the ladder is turned to other side of the street to reach a window 12 m high. The width of the street is :
- (a) 15 m                              (b) 21 m                              (c) 36 m                              (d) None of these
42. A road which is 7 m wide surrounds a circular park whose circumference is 352 m. The area of road is :
- (a)  $2464m^2$                       (b)  $2520m^2$                       (c)  $2618m^2$                       (d) None of these

43. In the given figure, if  $AB \parallel CD$ , the value of  $(x + y)$  is :
- (a)  $58^\circ$                               (b)  $59^\circ$
- (c)  $79^\circ$                               (d) None of these



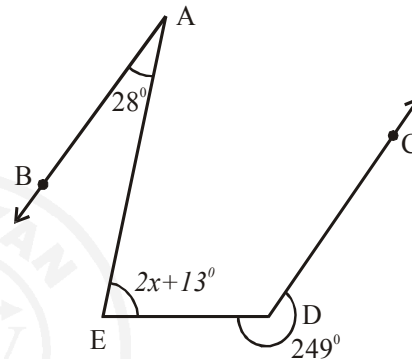
44. PQRS is a diameter of a circle of radius 6 cm. The lengths PQ, QR and RS are equal. Semi-circles are drawn on PQ and QS as diameters as shown in figure :



The area of shaded region is :

- (a)  $\frac{264}{7} \text{ cm}^2$       (b)  $\frac{284}{7} \text{ cm}^2$   
 (c)  $\frac{312}{7} \text{ cm}^2$       (d) None of these
45. In given figure, if  $AB \parallel CD$ , then value of  $x =$

- (a)  $32^\circ$       (b)  $42^\circ$   
 (c)  $52^\circ$       (d) None of these




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**SPACE FOR ROUGH WORK**



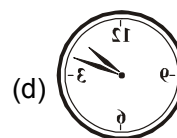
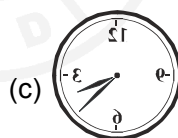
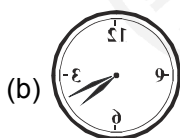
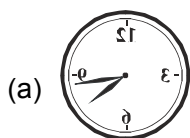
## PART - III

### LOGICAL APTITUDE

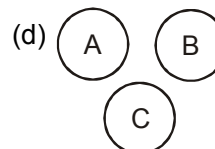
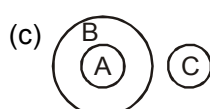
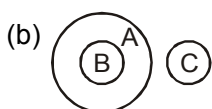
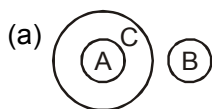
46. Find out the number from alternatives which will come in place of question mark '?' to continue the sequence 4, 6, 8, 9, ?  
 (a) 10                      (b) 11                      (c) 12                      (d) 13
47. Given  $(16 \text{ feet})^{1/2} = (0.25 \text{ inches})^{1/2}$  which one of following statements is true :  
 (a)  $4 \text{ feet} = 0.5 \text{ inches}$                       (b)  $4 \text{ feet} = 1.5 \text{ inches}$   
 (c)  $16 \text{ feet} = 0.25 \text{ inches}$                       (d)  $256 \text{ feet} = 0.0625 \text{ inches}$
48. \$ means +, B means -, @ means x, A means  $\div$ , Then find solution for 5 \$ 9 A 2 B 20 A 8 @ 7 \$ 12  
 (a) 1                      (b) 24                      (c) 4                      (d) 9
49. Choose the mirror image of clock as shown in following figure 'X' from given alternatives :



(X)



50. Which word from given options can't be formed by using letters of given word "Herringbone" .  
 (a) Biner                      (b) Bane                      (c) Hinge                      (d) All
51. Pointing to a person, Ashish said "He is the only Son of my Grandfather's only Daughter." How is Ashish related to that person.  
 (a) Father                      (b) Brother                      (c) Son                      (d) None / Himself.
52. Which of the following diagram indicates best relation between (A) Carat (B) Mass (C) Yard

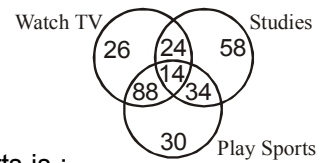


53. If E is A, A is R, R is X, M is S, T is W, P is D, W is E and D is T. Then what is WATERED ?  
 (a) XERSWTA                      (b) ERSXIAW                      (c) ERWAXAT                      (d) ETRXWXD

54. One pair which is different from others, is :  
 (a) 19 and 362      (b) 17 and 290      (c) 15 and 226      (d) 13 and 168
55. Rahul walks 30 m towards south then turns to his right and start walking straight till he completes another 30 m. Then again turning to his left he walks 20 m. He then turns to his left and walks for 30 m. How far is he from his initial position :  
 (a) 30 m      (b) 50 m      (c) 10 m      (d) 60 m.

**Directions:**

**The adjacent diagram shows the preference of student population for leisure activities. Study the given figure and answer the question No. 56 & 57 .**



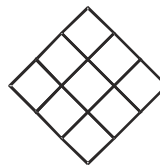
56. The number of students who either like studies or like to play sports is :  
 (a) 48      (b) 248      (c) 88      (d) 72
57. How many students like more than one of given activities.  
 (a) 114      (b) 274      (c) 160      (d) 146
58. Choose the correct figure from alternatives which figure will come in place of question mark '?' to continue the sequence :



- (a)      (b)      (c)      (d)

59. No. of Squares in figure

- (a) 9  
 (b) 10  
 (c) 13  
 (d) 14



60. Statements :

All Buds are leaves

All leaves are flowers

Conclusion - I  $\rightarrow$  All flowers are Buds.

II  $\rightarrow$  All Buds are flowers.

- (a) Only conclusion I follows.      (b) Only conclusion II follows  
 (c) Both conclusion I & II follows      (d) Neither conclusion I & II follows.