PART-I
IQ (MENTAL ABILITY)

This section contains **20 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.

1. Arrange the words in the alphabetical order and tick the one that comes second :
  (1) Explosion　　　(2) Emergency　　　(3) Ecstasy　　　(4) Eager

2. A watch reads 9 O'clock and its hour hand is pointing South-East. In what direction, the minute hand of the watch is at that time?
  (1) North-East　　　(2) East　　　(3) South　　　(4) South-West

3. If **TRAIN** is coded as **USBJO** the code for **SCOOTER** would be
  (1) TDPPUFS　　　(2) TDOPVFS　　　(3) TBOOUFS　　　(4) RBPPUDT

4. Find the missing term
  1, 6, 13, 22, 33, ?
  (1) 44　　　(2) 45　　　(3) 46　　　(4) 47

5. Which letter will be the midway between the fourteenth letter from the left end and nineteenth letter from the right end in the alphabet series?
  (1) I　　　(2) K　　　(3) M　　　(4) G

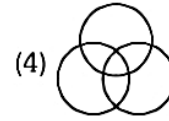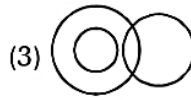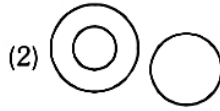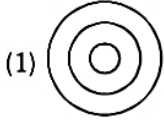**6.** Find the mirror image of figure (X).

(X)

(1)　　　(2)　　　(3)　　　(4)

7. Five girls are standing in a row facing East. Savita is to the left of Kavitha, Vanitha. Kavitha, Vanitha and Lalita are to the left of Sarita. Lalita is between Kavitha and Vanitha. If vanitha is fourth from the left, how far is kavitha from the right ?
  (1) 4th　　　(2) 3rd　　　(3) 5th　　　(4) 2nd

8. In the following question, find which one word can not be made from the letters of the given word.
  SUPERIMPOSABLE
  (1) SPIRE　　　(2) REPTILE　　　(3) POSSIBLE　　　(4) REPOSE

9. Which one of the following Venn diagrams best illustrates the three classes :
Rhombus, Quadrilaterals, Polygons

(1) (2) (3) (4)

10. Abhay walks towards East and travel 25 km then turn towards north and move 15 km then again turn toward west and travel 25 km. How far is he from the starting position?
(1) 65 km (2) 15 km (3) 25 km (4) 40 km

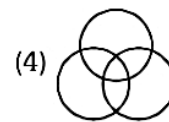**11.** If in a certain code language 'NEETA' is written as 'MVVGZ' then what word will be written for 'IZHSNR'?
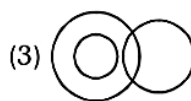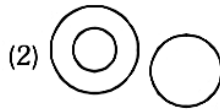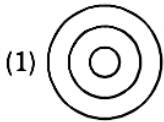(1) VANDANA (2) RASHMI (3) ANJALI (4) POONAM

12. *Direction :* What should come in place of question mark.
FLP, INS, LPV, ?
(1) ORY (2) UXZ (3) VXY (4) None of these

13. Which one of the following Venn diagrams best illustrates the three classes : India, Taj mahal, Agra?

(1) (2) (3) (4)

14. Find the mirror image of given word.
PUBLISHER
(1) ꓤƎꓧƨⁱ⅃ꓭUꟼ (2) ꓤƎꓧƨI⅃ꓭUꟼ (3) ꓤƎꓧƨI⅃ꓭUꟼ (4) ꓤƎꓧƨI⅃ꓭUꟼ

15. Find the water image of given word.
POLAND
(1) ᑳ૦ﾖＶПD (2) ᑳ૦ﾖＶПD (3) ᑳ૦ﾖＶПD (4) ᑳ૦ﾖＶПD

16. *Direction:* Read the following information carefully and answer the questions based on it by selecting the correct option from the given alternatives.
(i) S, T, U, V, W, X and Y are sitting along a wall facing North direction.
(ii) U is on the immediate right of V.
(iii)T is at an extreme end and has W as his neighbour.
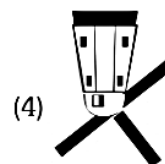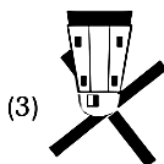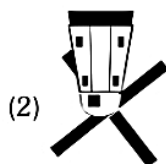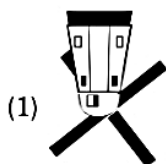(iv)Y is between W and X.
(v) V is siting third from the other end.
Who is sitting on the left of X ?
(1) T (2) Y (3) W (4) U

17. If **HEMANT** is coded as **851311420**, how would we code **MONIKA**
(1) 1315481111 (2) 1415139111 (3) 1412139121 (4) 1315149111

18. Find the water image of figure (X) ?

19. Find the missing term ?
0, 7, 26, 63, _____, 215, 342
(1) 126   (2) 125   (3) 124   (4) 127

20. Town D is towards East of town F. Town B is towards North of town D. Town H is towards South of town B. Towards which direction is town H from town F?
(1) East   (2) South-East
(3) North-East   (4) Data inadequate

PART-II
SECTION-A : PHYSICS

This section contains **12 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.

21. The Moon orbits the Earth in about _____ .
(1) 100 days   (2) 1 day   (3) 28 days   (4) 59 days

22. When the extended light source is smaller than the object
(1) divergent cone of umbra is formed
(2) Convergent cone of umbra is formed
(3) Size of umbra is equal to size of object
(4) None of these

23. Fill in the blanks: _____ energy is used to operate refrigerators, fans, machines, etc.
(1) Electrical   (2) wind   (3) solar   (4) mechanical

24. Change 24 inch to feet
(1) 204 feet   (2) 3 feet   (3) 2 feet   (4) 1.5 Feet

25. A well-lit tube light is :-
(1) Non-Luminous body   (2) Luminous body
(3) Artificial source of light   (4) Both (2) and (3)

26. A solar eclipse may occur when _____.
(1) There is a full moon
(2) The moon is between the Earth and the sun
(3) The Earth casts a shadow on the Earth.
(4) The Earth is between the moon and the sun

27. 6 coins were arranged one above the other. Their total height was 7 cm and 2mm. The thickness of each coin is :-
(1) 1.4 cm   (2) 12 mm   (3) 12 cm   (4) 1.2 mm

28. Whenever a force makes a body to move, then _____ is said to be done.
(1) Energy   (2) Power   (3) Motion   (4) Work

29. What kind of motion does pendulum have ?
(1) Rotational motion   (2) Rectilinear motion
(3) Oscillatory motion   (4) Circular motion

30. The Earth revolves around
(1) Itself   (2) Mars   (3) The Moon   (4) The Sun

31. A reflected image can be seen on :-
(1) a polished surface   (2) a rough surface
(3) transparent surface   (4) None of these

32. Which type of energy is used by you in using device given below

(1) Light energy   (2) Heat energy   (3) Chemical energy   (4) Muscular energy

SECTION-B : CHEMISTRY

This section contains **11 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.
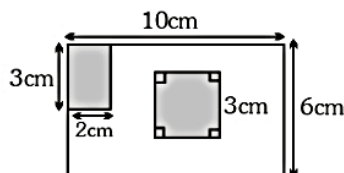
33. _____ is the cheapest natural fibre.
(1) Wool   (2) Silk   (3) Jute   (4) Cotton

34. Which of the following is not correct?
(1) Compound can be broken down into simpler substances by chemical method.
(2) A mixture can be separated into their components by any physical method.
(3) Element can be broken down into simpler particle by any physical or chemical method.
(4) The proportion of the constituent element in a compound is fixed.

35. A renewable natural source of energy is
(1) Petroleum   (2) Coal   (3) Nuclear fuel   (4) Trees

36. Which of the following statements are true or false?
(i) Fibre is the basic unit of all fabrics.
(ii) Filament are short fibres.
(iii) Jute is the outer covering of coconut.
(1) TFF   (2) TFT   (3) FFT   (4) TTF

37. In_____ state, matter is most difficult to be compressed.
(1) Liquid   (2) Gaseous   (3) Solid   (4) None of these

38. Kerosene floats on water because
(1) Kerosene has more density
(2) Kerosene has less energy
(3) Densities of water and kerosene are equal
(4) Water has more density

39. Which of the following is not an inexhaustible resource?
(1) Water   (2) Air   (3) Sunlight   (4) Coal

40. The melting point of ice is
(1) $0°C$ (2) $37°C$ (3) $4°C$ (4) $100°C$

41. The process of transferring the clear liquid (after sedimentation) without disturbing the sediment (insoluble heavy particles) is called.
(1) Sedimentation   (2) Decantation   (3) Sieving   (4) Filteration

42. Materials having lustre are
(1) Gold, silver, copper, iron   (2) Wood, cardboard, chalk, Iron
(3) Paper, gold, plastic, rubber   (4) Iron, aluminium, chalk, wood

43. Which of the following is a homogeneous mixture?
(1) An oil-water mixture   (2) A sand-water mixture
(3) Mist   (4) A nitrogen-oxygen mixture

SECTION-C : BIOLOGY

This section contains **12 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.

44. Part of leaf by which it is attached to stem is known as _____.
(1) Lamina   (2) Petiole   (3) Bark   (4) Vascular tissue

45. Our body prepares _____ in presence of sunlight, deficiency of which directly affect bones.
(1) Vitamin B   (2) Vitamin K   (3) Vitamin D   (4) Vitamin C

46. From the following how many statements are correct?
(a) The skin of many vegetables and fruits contain vitamins and minerals.
(b) Cooking results in the loss of certain nutrients.
(c) Repeated washing of rice and pulses may remove some vitamins and minerals present in them
(d) If the vegetables and fruits are washed after cutting or peeling them, it may result in the loss of some vitamins
(1) 2   (2) 3   (3) 4   (4) 1

47. Most important group of decomposers include
(1) Bacteria   (2) Fungi   (3) Virus   (4) Both (1) and (2)

48. The adaptation mechanism of chameleon is
(1) To hibernate in winter.
(2) To develop scaly skin on body.
(3) To migrate long distance in winter.
(4) Changing colours to suit with surrounding.

49. Total number of ribs present in human is
(1) 12 pairs   (2) 10 pairs   (3) 24 pairs   (4) 7 pairs

50. Maximum energy is provided by which food component?
(1) Carbohydrate   (2) Fat   (3) Protein   (4) Minerals

51. Which of the following are producers?
(1) Phytoplankton and sponge   (2) Phytoplankton and Hydra
(3) Plants and Hydra   (4) Phytoplankton and Algae

52. Human skeleton is composed of around _____ bones at birth. The number of bones in skeleton changes with age. It decrease to_____ bones by adulthood.
(1) 305, 206   (2) 350, 206   (3) 503, 206   (4) 205, 306

53. Reticulate venation is found in
(1) Wheat   (2) Grass   (3) Rice   (4) Neem

54. The living and non living things that interact in an environment constitute
(1) Trophic level   (2) Ecosystem   (3) Producer   (4) Atmosphere

55. Which food is source of vitamin D?
(1) Milk   (2) Egg   (3) Fish   (4) All of these

SECTION-D : MATHEMATICS

This section contains *25 Multiple Choice Questions.* Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.

56. Find the area of the unshaded part of the given figure.

(1) 45 sq. cm   (2) 52 sq. cm   (3) 68 sq. cm   (4) 78 sq. cm

57. The fraction $101\dfrac{27}{100000}$ on decimal form is :

(1) 0.01027

(2) 0.10127

(3) 101.00027

(4) 101.000027

58. *Direction :* A group of five friends have a hobby of collecting stamps. The pictograph in Fig. shows the number of stamps each friend has.

Use the pictograph to find the ratio of the number of stamps Rahul has to those Ashish has.

Name	No. of Stamps	= 20 Stamps
Shekhar	▤ ▤ ▤ ▤ ▤	
Rahul	▤ ▤ ▤ ▤ ▤ ▤	
Gaurav	▤ ▤ ▤ ▤ ▤	
Ashish	▤ ▤ ▤ ▤ ▤ ▤ ▤	
Dhruv	▤ ▤ ▤ ▤ ▤ ▤ ▤ ▤	

(1) 1 : 8

(2) 6 : 7

(3) 5 : 7

(4) 3 : 5

59. A train journey of 50 km costs Rs. 225. How much will a journey of 125 km cost ?

(1) Rs. 475.50

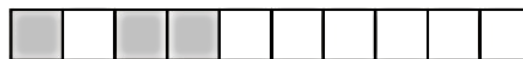(2) Rs. 512.50

(3) Rs. 562.50

(4) Rs. 575.50

60. Which type of number is 'zero' ?

I. Natural

II. Whole

III. Integer

(1) II

(2) I and II

(3) II and III

(4) I, II and III

61. The side of a square is 2.6 cm. Find its perimeter.

(1) 10.4 cm

(2) 10.6 cm

(3) 10.8 cm

(4) 10.2 cm

62. What is the decimal fraction shown by the shaded part of the figure given below?

(1) 2.5

(2) 0.5

(3) 0.6

(4) 0.3

63. Divide 77664 by 56. Then,

(1) Q = 1386, R = 46

(2) Q = 1386, R = 48

(3) Q = 1387, R = 46

(4) Q = 1387, R = 48

64. A line from the vertex of triangle and perpendicular on opposite side is called as

(1) Perpendicular bisector

(2) Median

(3) Altitude

(4) Angle bisector

65. The following pictograph shows the number of absentees in a class VI of 40 students during the previous week.

Days	Number of absentees 😊 = 1 absentee
Monday	😊 😊 😊 😊 😊 😊 😊
Tuesday	😊 😊 😊 😊 😊
Wednesday	😊 😊
Thursday	
Friday	😊 😊 😊 😊 😊

On which day, there was full attendance?
(1) Thursday　　(2) Monday　　(3) Wednesday　　(4) Cann't say

66. A beaker is $\frac{5}{7}$ filled with water. Another 10 litres of water is needed to fill the beaker to its brim.

What is the capacity of the beaker?
(1) 50 litres　　(2) 20 litres　　(3) 70 litres　　(4) 35 litres

67. Monika takes $\frac{1}{6}$ hour to walk to the playground and $\frac{1}{3}$ hour to walk from the playground to school.

How much time does it take her to walk to the playground and then to school?

(1) $\frac{2}{9}$ hour　　(2) $\frac{1}{3}$ hour　　(3) $\frac{1}{2}$ hour　　(4) $\frac{2}{3}$ hour

68. In the product of 200 and 25, which digit is in the hundred's place?
(1) 0　　(2) 5　　(3) 10　　(4) None of these

69. Chinki can cycle from point A to point B and return to point A in 10 minutes. She can cycle there and walk back in 20 minutes. It will take _____ mins for her to walk there and walk back.
(1) 10　　(2) 20　　(3) 30　　(4) 40

70. If ▽▽ = 18. How many ice creams will represent 90?
(1) 15　　(2) 10　　(3) 20　　(4) 5

71. How many edges are there in a cube?
(1) 6　　(2) 4　　(3) 12　　(4) 7

72. Subtract the sum of 156 and –213 from the sum of –117 and –516.
(1) –57　　(2) –633　　(3) –576　　(4) 57

73. The fraction to be added to $6\dfrac{7}{15}$ to get $8\dfrac{1}{5}$ is equal to :

(1) $\dfrac{11}{15}$

(2) $1\dfrac{11}{15}$

(3) $\dfrac{44}{3}$

(4) $\dfrac{3}{44}$

74. The number of children in 25 families of a colony are given below :
2, 0, 2, 4, 2, 1, 3, 3, 1, 0, 2, 3, 4, 3, 1, 1, 1, 2, 2, 3, 2, 4, 1, 2, 2
The number of families in which children are more than 3?
(1) 3
(2) 2
(3) 4
(4) 5

75. Multiply $\dfrac{7}{10}$ by $\dfrac{5}{21}$.

(1) 1

(2) $\dfrac{1}{6}$

(3) $\dfrac{7}{5}$

(4) $\dfrac{3}{5}$

76. Add :   5 kg 216 g
                   2 kg 814 g
                   3 kg 110 g
(1) 11.140 kg   (2) 111.40 kg
(3) 1.1140 kg   (4) None of these

77. Successor of 10000000 is_____.
(1) 99999999   (2) 10000001
(3) 10000002   (4) None of these

78. The following pictograph shows different kinds of trees planted in a park. Each symbol represents 8 trees. Look at the pictograph and answer the question given below :

How many neem trees are there?
(1) 30
(2) 40
(3) 35
(4) 32

79. If $47.2506 = 4A + 7B + 2C + 5D + 6E$. Find $A + B + C + D + E$
    (1) 11.111   (2) 10.001   (3) 11.1101   (4) 10000

80. Roman numeral for 498 is _____ .
    (1) CDCXVIII   (2) CDCXIV   (3) CDXCVIII   (4) None of these

Space for rough work