

**Max. Time: 120 min****Max Marks: 320****Instructions:**

- i. The test paper consists of **80** multiple choice questions numbered from **1 to 80**, each question followed by four alternatives 1, 2, 3 and 4.
- ii. Mental Ability 1 to 20, Mathematics 21 to 35, Physics 36 to 50 and Chemistry 51 to 65, Biology 66 to 80.
- iii. Each question has only one correct option.
- iv. Each correct answer carries **+4 Marks**.
- v. No negative marking for wrong answer.

MAT (Q.NO.1 TO 20)**Directions (Q. No: 1-3): Find the missing term in the given number series:****1. 3, 8, 13, 24, 41, ?**

- 1) 70 2) 75 3) 80 4) 85

2. 4, 12, 36, 108, ?

- 1) 144 2) 216 3) 304 4) 324

3. 5760, 960, ?, 48, 16, 8

- 1) 120 2) 160 3) 192 4) 240

4. How many such 5s are there in the following number sequence each of which is immediately preceded by 3 or 4 but not immediately followed by 8 or 9?

3 5 9 5 4 5 5 3 5 8 4 5 6 7 3 5 7 5 5 4 5 2 3 5 1 0

- 1) None 2) Three 3) Four 4) Five

5. In the series given below, how many 8s are there each of which is exactly divisible by its immediate preceding as well as succeeding numbers?

2 8 3 8 2 4 8 2 4 8 6 8 2 8 2 4 8 3 8 2 8 6

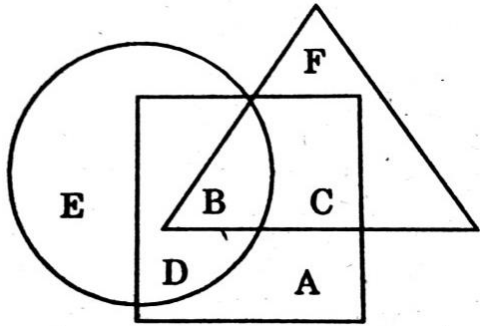
- 1) One 2) Two 3) Three 4) Four

6. In a row of a boys facing the North, A is sixteenth from the left end and C is sixteenth from the right end. B, who is fourth to the right of A, is fifth to the left of C in the row. How Many boys are there in the row?

- 1) 39 2) 40 3) 41 4) 42

7. N ranks fifth in a class. S is eighth from the last. If T is sixth after N and just in the middle of N and S, then how many students are there in the class
- 1) 23 2) 24 3) 25 4) 26
8. How many such pairs of letters are there in the word SEQUENTIAL which have as many letters between them in the word as in the English alphabet?
- 1) Nil 2) Four 3) One 4) Three
9. If DRIVER=12, PEDESTRIAN=20, ACCIDENT=16, then CAR=?
- 1) 3 2) 6 3) 8 4) 10
10. If DELHI is coded as 73541 and CALCUTTA as 82589662, how can CALICUT be coded?
- 1) 5279431 2) 5978213 3) 8251896 4) 8543691

Directions (Q.No-11 to 12): In the following diagram, three classes of population are represented by three figures. The triangle represents the school teachers, the square represents the married persons and the circle represents the persons living in joint families.

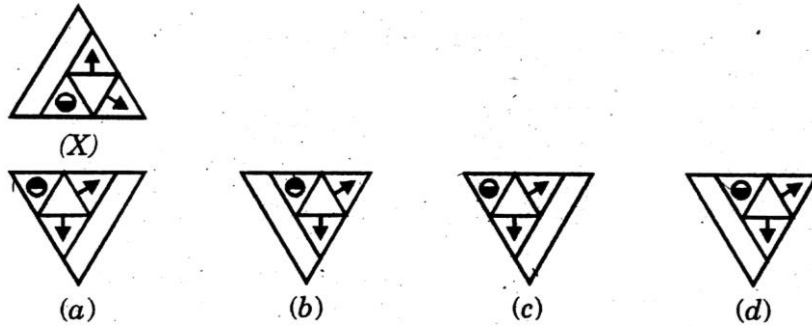


11. Married persons living in joint families but not working as school teachers are represented by
- 1) C 2) F 3) D 4) A
12. Married teachers living in joint families are represented by
- 1) C 2) B 3) D 4) A

Directions (Q.No-13 to 14) : In each of the following questions, If the given interchange are made in signs and numbers, which one of the four equations would be correct ?

13. Given interchanges: signs – and ÷ and numbers 4 and 8
- 1) $6 - 8 \div 4 = -1$ 2) $8 - 6 \div 4 = 1$
 3) $4 \div 8 - 2 = 2$ 4) $4 - 8 \div 6 = 2$

19. Find out the water image.



1) a

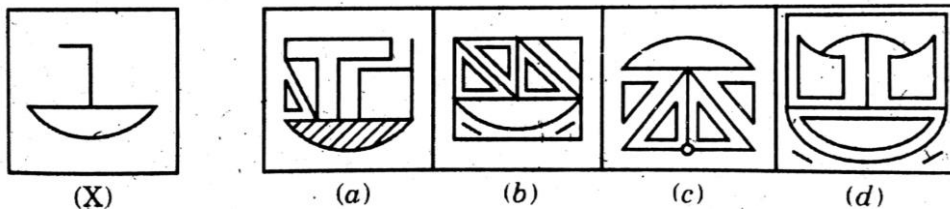
2) b

3) c

4) d

Directions (Q.No:20) : Spot out the figure (X) in given options.

20.



1) a

2) b

3) c

4) d

MATHEMATICS (Q.NO.21 TO 35)

21. The sum of two integers is 6. If one of them is -3. Then the other number is

1) -9

2) 9

3) 3

4) -3

22. $\left(\frac{1}{5}\right)^7 \div \left(\frac{-1}{5}\right)^2$ is equal to

1) $\left(\frac{1}{5}\right)$

2) $\left(\frac{1}{5}\right)^5$

3) 0

4) 1

23. $\frac{-2}{3} + \frac{5}{9} - \left(\frac{-7}{6}\right)$ is

1) $\frac{19}{18}$

2) $\frac{-19}{18}$

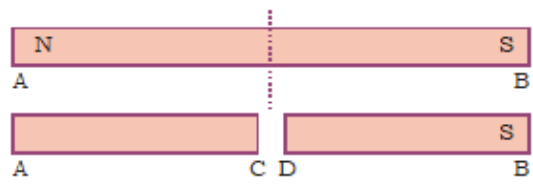
3) $\frac{9}{10}$

4) $\frac{7}{13}$

- 34. The length & breadth of a rectangular field are 25m & 10m respectively. What is its perimeter?**
- 1) 250 m 2) 35m 3) 70m 4) 5m
- 35. If $\triangle ABC \cong \triangle XYZ$ and $AB = XY = 10\text{cm}$ and $\angle A = \angle X = 40^\circ$. If $\angle B = 55^\circ$, then $\angle Z$ is equal to**
- 1) 55° 2) 40° 3) 95° 4) 85°

PHYSICS (Q.NO.36 TO 50)

- 36. A bar magnet is immersed in a heap of iron filings and pulled out. The amount of iron filling clinging to the**
- 1) North-pole is almost equal to the South Pole.
 2) North-pole is much more than the South Pole.
 3) North-pole is much less than the South Pole.
 4) Magnet will be same all along its length.
- 37. A soft-iron core with a wire around it and acts as a magnet as long as current passes through the coil is called**
- 1) Bar magnet 2) horse-shoe magnet
 3) Electro magnet 4) Magnetic needle
- 38. A bar magnet AB is cut into two pieces AC and DB. The ends C and D will have.**

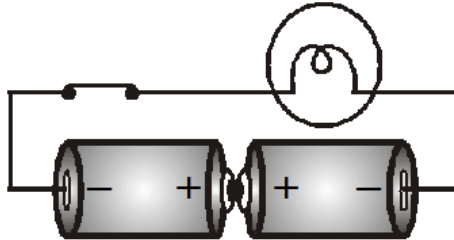


- 1) North polarity 2) South polarity
 3) C as south polarity and D as north polarity
 4) C as north polarity and D as south polarity
- 39. Two students while sitting across a table looked down on to its top surface. They noticed that they could see their own and each other's image. The table top is likely to be made of:**
- 1) Unpolished wood 2) Red stone
 3) Glass sheet 4) Wood top covered with cloth
- 40. Which of the following letter do not shows lateral inversion?**
- 1) H 2) J 3) K 4) N

41. You are provided with a convex mirror, a concave mirror, a convex lens and a concave lens. You can get an inverted image from

- 1) Both concave lens and convex lens.
- 2) Both concave mirror and convex mirror.
- 3) Both concave mirror and convex lens.
- 4) Both convex mirror and concave lens.

42. Choose the correct statement for circuit shown in the figure



- 1) The bulb in the circuit glows.
- 2) The bulb in the circuit does not glow.
- 3) The bulb in the circuit first glows and then stops glowing.
- 4) The bulb in the circuit blinks for every one second.

43. When one coulomb charge flows through a conductor in one second, the current flowing through the conductor is

- 1) 1 A
- 2) 10 A
- 3) 2 A
- 4) 4 A

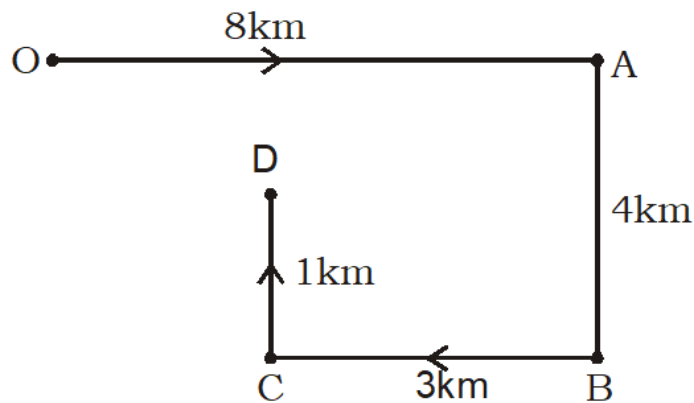
44. The liquid used in a simple voltaic cell is

- 1) Dilute sodium hydroxide
- 2) Dilute nitric acid
- 3) Dilute hydrochloric acid
- 4) Dilute sulphuric acid

45. A particle moves along a straight line with acceleration a_1 for time t_1 , a_2 for time t_2 then average acceleration is equal to

- 1) $a_1 t_1 + a_2 t_2$
- 2) $\frac{a_1 + a_2}{t_1 + t_2}$
- 3) $\frac{a_1 t_1 + a_2 t_2}{a_1 t_1 \times a_2 t_2}$
- 4) $\frac{a_1 t_1 + a_2 t_2}{t_1 + t_2}$

46. A cyclist moves from O to D along the path as shown the distance covered by him is



- 1) 16km
- 2) 20km
- 3) 3km
- 4) 5km

47. A particle completes half a revolution along a circular path of radius 'r' the displacement travelled by the particle is
1) πr 2) $2\pi r$ 3) $3\pi r$ 4) $2r$
48. When will the numerical values of Fahrenheit thermometer be equal and opposite to values on Celsius scale?
1) 14.43 2) 11.43 3) 18.43 4) 20.43
49. The following one determines the direction of flow of heat
1) Temperature 2) Thermometer
3) Altimeter 4) Ammeter
50. Stainless steel pans are usually provided with copper bottoms. The Reason for this could be that
1) Copper bottom makes the pan more durable.
2) Such pans appear colourful.
3) Copper is a better conductor of heat than the stainless steel.
4) Copper is easier to clean than the stainless steel.

CHEMISTRY (Q.NO.51 TO 65)

51. Air is
1) Element 2) Mixture 3) Compound 4) Gas
52. Which of the following is inactive at ordinarily
1) Oxygen 2) Nitrogen
3) Carbon di oxide 4) Carbon mono oxide
53. Helium, Neon, Argon, Krypton and xenon are collectively called
1) Common gas 2) Noble gases
3) Active mass 4) Gobar gas
54. 2Mole of water formed by
1) 2 mole of oxygen 2 mole of Hydrogen 2) 3 mole of oxygen 2 mole of Hydrogen
3) 2 mole of oxygen 2 mole of Hydrogen 4) 1 mole of oxygen 2 mole of Hydrogen
55. Chemical name of water is
1) Dihydrogen monoxide 2) Dihydrogen dioxide
3) Hydrogen dioxide 4) Hydrogen monoxide
56. Who proved that water is a compound made up of two elements?
1) Cavendish 2) Bohr
3) Berzelius 4) Rutherford

69. Flat worms are found in the of a pond.

- 1) surface 2) mid water 3) pond margin 4) bottom

70. Human beings are :

- 1) herbivores 2) carnivores 3) omnivores 4) autotrophs

71. This is not a herbivore

- 1) rabbit 2) fox 3) elephant 4) cow

72. The Oysters are found in :

- 1) ponds 2) rivers 3) seas 4) underground

73. The habitat of earthworm is

- 1) underground 2) deep sea 3) river bed 4) tree

74. The main root which becomes thick and has thin root lets in a plant is called

- 1) fibrouts root 2) root hair 3) tap root 4) root follicle

75. A plant that stores food in its root :

- 1) potato 2) carrot 3) garlic 4) ginger

76. In which of the following, we observe change in weather record?

- 1) Humidity 2) Wind speed 3) Temperature 4) All of these

77. Moving air is called :

- 1) Wind 2) Storm 3) Thunders 4) Cyclone

78. Cuscuta is an example of :

- 1) autotroph 2) parasite 3) saprophyte 4) symbiont

79. Haustoria are :

- 1) roots 2) stems 3) leaves 4) all of them

80. Raw materials involved in the process for photosynthesis :

- 1) Carbondioxide 2) water 3) sunlight 4) all of them