

**HAVE CONTROL → HAVE PATIENCE → HAVE CONFIDENCE ⇒ 100% SUCCESS**

**BEWARE OF NEGATIVE MARKING**

**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 these words in alphabetical order and tick the one that comes last

1. Abandon 2. Actuate 3. Accumulate 4. Acquit 5. Achieve

(1) Actuate (2) Accumulate (3) Acquit (4) Achieve

2. Choose the word which is different from the rest.

(1) Gangtok (2) Singhbhum (3) Hyderabad (4) Chennai

3. If FRIEND is coded as HUMJTK, how is CANDLE written in that code ?

(1) EDRIRL (2) DCQHJK (3) ESJFME (4) DEQJQM

4. If South-East becomes North, North-East becomes West and so on. What will West become?

(1) North-East (2) North-West (3) South-East (4) South-West

5. Choose the alternative which is closely resembles the mirror image of the given combination.

**TARAIN1014A**

(1) AƆ101ƆNIARAL (2) A101ƆNIARAT (3) A101ƆTARAIN (4) AƆ101ƆNIARAT

6. How many 4's are there preceded by 7 but not followed by 3?

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

(1) Four (2) Three (3) Six (4) Five

7. Look at this series: 7, 10, 8, 11, 9, 12, ... What number should come next ?

(1) 7 (2) 10 (3) 12 (4) 13

8. What letters will fill the blank?

Z, X, V, T, R, \_\_, \_\_

(1) M, N (2) P, N (3) O, K (4) K, S

9. Which of the following diagrams indicates the best relation between Women, Mothers and Engineers ?



10. Choose the alternative which is closely resembles the water-image of the given combination.

**NUCLEAR**

(1) ƆAƆEƆSUI (2) IUCƆEAV (3) IUCƆEAV (4) IUCƆEAV

11. A B C D E F G H I J K L M N O P Q R S T U V W X Y Z.

Which letter is in the middle of 13th letter from the left and 4th letter from the right ?

- (1) R                                      (2) I                                      (3) J                                      (4) S

12. Which pair does not belong with the others ?

- (1) 2 – 8                                      (2) 3 – 27                                      (3) 4 – 32                                      (4) 5 – 125

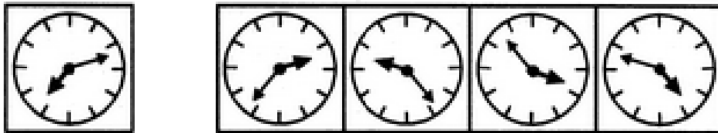
13. If air is called green, green is called blue, blue is called sky, sky is called yellow, yellow is called water and water is called pink, then what is the color of clear sky ?

- (1) Blue                                      (2) Sky                                      (3) Yellow                                      (4) Water

14. A man is facing north-west. He turns 90° in the clockwise direction, then 180° in the anticlockwise direction and then another 90° in the same direction. Which direction is he facing now ?

- (1) South                                      (2) South-west                                      (3) South-east                                      (4) East

15. Choose the correct mirror image of the given figure (X) from amongst the four alternatives.



- (X)                                      (1)                                      (2)                                      (3)                                      (4)

16. In a row, Kumar is at 7th place from the left and Pawan is at 9th place from the right. When they interchange the positions Kumar becomes 11th from left. How many were seated in the row ?

- (1) 19                                      (2) 20                                      (3) 21                                      (4) 27

17. Complete the number series given below ?

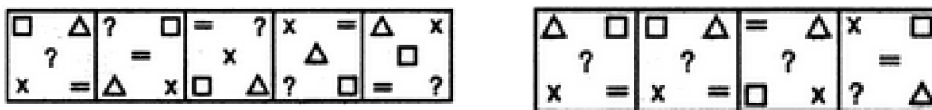
13    17    19    ?    29    31

- (1) 58                                      (2) 67                                      (3) 23                                      (4) 96

18. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

**Problem Figures:**

**Answer Figures:**

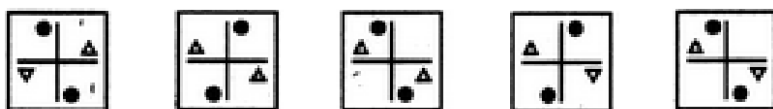


- (A)    (B)    (C)    (D)    (E)                                      (1)    (2)    (3)    (4)

19. Which of the following diagrams indicates the best relation between Factory, Product and Machinery?



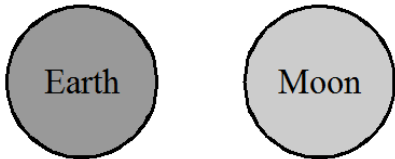
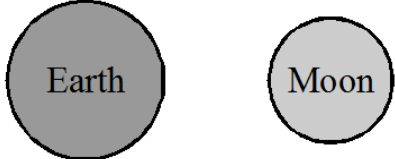
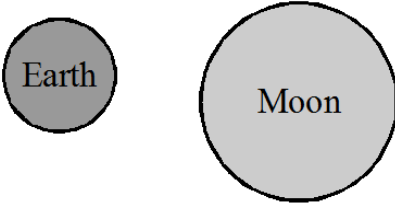
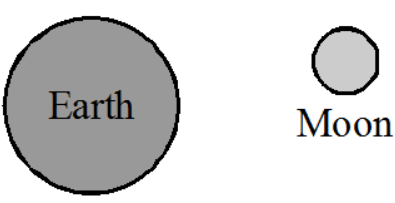
20. Choose the correct water image of the given figure (X) from amongst the four alternatives.



- (X)                                      (1)                                      (2)                                      (3)                                      (4)

**PHYSICS**

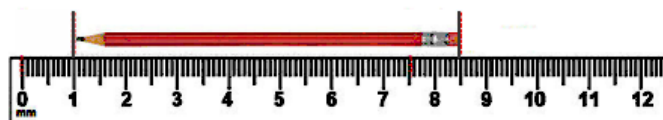
This section contains **20 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

21. There is no atmosphere on moon.  
 (1) True (2) False  
 (3) Cannot say (4) There is little air on moon
22. Convert 60 second into minute :  
 (1) 10 minute (2) 100 minute (3) 1 minute (4) 2 minute
23. A news flashed on T.V. that 70 people died in Ladakh in an event. The event here can be  
 (1) Tsunami (2) Cyclone (3) Avalanche (4) Winds
24. Which planet is the smallest in the following ?  
 (1) Neptune (2) Jupiter (3) Mercury (4) Uranus
25.  $0.1 \text{ km} = \underline{\hspace{2cm}} \text{ m}$   
 (1) 10 (2) 100 (3) 1000 (4) 10000
26. A long, high sea wave caused by an earthquake or other disturbance is called:-  
 (1) Tsunami (2) Earthquake (3) Drought (4) Wildfires
27. The diameter of Earth is 12,756 km. The diameter of the Moon is 3,476 km. Which pair of circles best represents the relative sizes of the Earth and the Moon?  
 (1)  (2)   
 (3)  (4) 
28.  $1 \text{ kg} + 10 \text{ sec} = Y$ , then Y equal to  
 (1) 11 kg (2) 11 sec (3) 11 kg sec (4) Not defined
29. Lightning and thunder are caused due to :  
 (1) Electrical charge in the Earth  
 (2) Electrical charge in the clouds  
 (3) Leakage of electric charge by transmission lines  
 (4) Reflection of light

30. S.I. unit of Time is :
- (1) Second                      (2) Minute                      (3) Hours                      (4) Year
31. The movement of earth on its axis is called–
- (1) Rotation                      (2) Revolution                      (3) Volcano                      (4) Reflection
32. The unit of area is :
- (1) meter                      (2) square                      (3) meter square                      (4) meter cube
33. If there is no rain, there will be
- (1) Flood                      (2) Earthquake                      (3) Volcano                      (4) Drought
34. The shock waves produced by an earthquake travel :
- (1) along the surface                      (2) deep inside the earth  
(3) both on the surface and inside the earth                      (4) only in the air
35. Which unit of length is preferred to measure distance between Jaipur and Kota ?
- (1) Centimetre                      (2) metre                      (3) Kilometre                      (4) Millimeter
36. All volcanoes are fed by and get their energy from \_\_\_\_\_.
- (1) Rocks                      (2) Magma                      (3) Gas                      (4) Soil
37. Earth completes one revolution in ...
- (1) 370 days                      (2) 367 days and 1 hour  
(3) 365 days 6 hours                      (4) 30 days
38. One meter has 10 equal parts called :
- (1) millimeter                      (2) centimeter                      (3) decimeter                      (4) nanometer
39. The safety instructions shown in image are most relevant in case of :



- (1) flood                      (2) earthquake  
(3) drought                      (4) volcanic eruption
40. What is the length of the pencil shown in figure given below ?



- (1) 7 cm                      (2) 8 cm                      (3) 7.5 cm                      (4) 8.5 cm

**CHEMISTRY**

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

41. When partially decomposed plant material is buried beneath sediment under heat and pressure, it turns into :
- (1) Coal                      (2) Natural gas                      (3) Oil                      (4) Metamorphs
42. The process of changing a liquid into gaseous state is called :
- (1) Melting                      (2) Sublimation                      (3) Boiling                      (4) Condensation
43. What do all rocks have in common ?
- (1) same colour                      (2) same shape  
(3) they all contain some kind of minerals                      (4) same size
44. \_\_\_\_ is a colourless and odourless gas which is used in making light bulbs.
- (1) Air                      (2) Oxygen                      (3) Argon                      (4) Hydrogen
45. Which of the following is not a way to conserve natural resources ?
- (1) Growing a large number of plants                      (2) Using coal and oil very carefully  
(3) Afforestation                      (4) Deforestation
46. We can't make a statue of water, why ?  
A: Liquid can't have its own shape.  
B: It is hard to change shape of water like iron.
- (1) Only A                      (2) Only B  
(3) Both A and B                      (4) Neither A nor B.
47. Metallic minerals are obtained from their \_\_\_\_\_ .
- (1) Ores                      (2) Sediments                      (3) Fossils                      (4) Fuels
48. The increases in the number of factories and vehicles has resulted in the increase of :
- (1) Oxygen                      (2) Methane  
(3) Carbon dioxide                      (4) Water vapour
49. Biological resources are :
- (1) Plants and animals                      (2) Land, air and water  
(3) Sunlight, air and water                      (4) Minerals and energy
50. Water vapour is an example of
- (1) Solid                      (2) Liquid                      (3) Gas                      (4) Semi-solid
51. Which is hardest naturally occurring substance found on earth ?
- (1) Diamond                      (2) Graphite                      (3) Coal                      (4) Petroleum

52. I am a state of matter : my molecules are jumping all over the place-I must be a–
- (1) Solid                      (2) Liquid                      (3) Gas                      (4) Frog
53. Rocks formed from remains of once living plants and animals are called–
- (1) Clastic sedimentary rock                      (2) Chemical sedimentary rock  
(3) Organic sedimentary rock                      (4) Inorganic sedimentary rock
54. Which of the following gases is not a greenhouse gas ?
- (1) Carbon dioxide                      (2) Oxygen  
(3) Methane                      (4) CFC
55. The temperature at which liquid starts boiling is called:
- (1) Melting point                      (2) Freezing point                      (3) Boiling point                      (4) Fusion point
56. When layers are piled together and pressure is applied what type of new rock is formed ?
- (1) Metamorphic rock                      (2) Sedimentary rock  
(3) Minerals                      (4) Igneous rock
57. \_\_\_\_\_ is used in refrigerators, air conditioners and in many other industrial processes.
- (1) Carbon dioxide                      (2) Carbon monoxide  
(3) Chlorofluorocarbon                      (4) Methane
58. Which of the following is opposite to boiling?
- (1) Evaporation                      (2) Freezing                      (3) Melting                      (4) Condensation
59. The percentage of oxygen gas in air is:
- (1) 12%                      (2) 21%                      (3) 78%                      (4) 85%
60. The process by which a solid directly changes into gas is known as \_\_\_\_\_
- (1) Condensation                      (2) Sublimation                      (3) Melting                      (4) Evaporation

**BIOLOGY**

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

61. Which part of the tongue tastes bitter ?  
(1) Front (2) Back (3) Middle (4) Lateral side
62. When a seed germinates it makes a—  
(1) Fruit (2) Flower (3) Seedling (4) Leaf
63. Which of the following will get maximum energy—  
(1) Primary consumers (2) Secondary consumers  
(3) Tertiary consumers (4) Top consumers
64. I am the green part of the plant which make food for plant, Who I am ?  
(1) Root (2) Flower (3) Seed (4) Leaves
65. Which solution is given when a person has vomiting and loose motions ?  
(1) ORS (2) Fruit juice (3) Milk (4) Banana
66. Which of the following things are not required for germination of seed ?  
(1) Water (2) Optimum temperature  
(3) Oxygen (4) CO<sub>2</sub>
67. We get paper from which of the following plant—  
(1) Coconut (2) Bamboo (3) Rubber (4) Pepper
68. Which of the following is a herb?  
(1) Mango (2) Ficus (3) Neem (4) Mint
69. What are the tiny bumps present on the tongue called ?  
(1) Taste buds (2) Smell buds (3) Flower buds (4) Axillary buds
70. Decomposers of ecosystem are—  
(1) Algae, bacteria (2) Bacteria and fungi  
(3) Algae, fungi (4) Algae, bacteria and fungi
71. Which of the following is true ?  
(1) Baby plants grow from stem (2) Plants do not grow in very hot places  
(3) Seeds are present in stem (4) Money plant is a climber
72. What is the muscular bag of digestive system called ?  
(1) Mouth (2) Intestine (3) Stomach (4) Pancreas
73. The process of scattering of seeds away from the mother plant is called—  
(1) Pollination (2) Germination (3) Reproduction (4) Dispersal





**MATHEMATICS**

This section contains **40 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

81. If the area of a square is  $225 \text{ m}^2$ , then its perimeter is  
 (1) 15 m                      (2) 60 m                      (3) 225 m                      (4) 30 m
82. Fill in the blank below :  
 \_\_\_\_\_  $\times 602 = 60200$   
 (1) 602                      (2) 100                      (3) 1000                      (4) 6020
83. Sum of first 4 multiples of 10 is  
 (1) 60                      (2) 40                      (3) 80                      (4) 100
84. What is the only even prime number ?  
 (1) 3                      (2) 4                      (3) 2                      (4) 0
85. Chhota Bheem wants to buy 10 mangoes and 1 mango costs Rs. 12. Then how many rupees he would need to buy all the 10 mangoes.  
 (1) Rs. 120                      (2) Rs. 12                      (3) Rs. 10                      (4) Rs. 1200
86. An angle that is exactly  $90^\circ$  is called ..... ?  
 (1) Complementary Angle                      (2) Right angle  
 (3) Acute angle                      (4) Obtuse angle
87. A curve which ends at the starting point is called a \_\_\_\_\_.  
 (1) Opposite figure                      (2) Open figure  
 (3) Closed figure                      (4) Line
88. If the side of a square is 4 cm, then its area is  
 (1)  $4 \text{ cm}^2$                       (2)  $8 \text{ cm}^2$                       (3)  $16 \text{ cm}^2$                       (4)  $12 \text{ cm}^2$
89. Manish multiplied 100 by 89 instead of multiplying by 79. How much was his answer greater than the correct answer?  
 (1) 100                      (2) 1000                      (3) 10000                      (4) 10
90. Total number of factors of 12 are :  
 (1) 6                      (2) 7                      (3) 5                      (4) 3
91. Write the number 23,98,257 in words.  
 (1) Twenty three thousand ninty eight hundred fifty seven  
 (2) Twenty three lakhs ninty eight thousand two hundred fifty seven  
 (3) Twenty three lakhs ninty eight thousand fifty seven  
 (4) Twenty three thousand two hundred fifty seven

92. The length of a rectangle is 8 cm and its area is  $48 \text{ cm}^2$ . The perimeter of the rectangle is  
(1) 14 cm                      (2) 24 cm                      (3) 12 cm                      (4) 28 cm
93.  $352273 \times 0 \times 1 =$  \_\_\_\_\_  
(1) 0                              (2) 1                              (3) 352273                      (4) -1
94. What is the sum of factors of 6 ?  
(1) 12                              (2) 13                              (3) 15                              (4) 5
95. The greatest prime number less than 50 is  
(1) 50                              (2) 43                              (3) 47                              (4) 49
96. If cost of a scooter is Rs. 24024, then find the cost of such 5 scooters.  
(1) Rs. 12012                      (2) Rs. 120120                      (3) Rs. 240240                      (4) Rs. 121120
97. The perimeter of a triangle whose sides are 1.2 cm, 3.4 cm and 1.7 cm, is  
(1) 6.3 cm                      (2) 6.2 cm                      (3) 6.5 cm                      (4) 6.4 cm
98. 1 kg of sugar costs Rs. 25. How many kgs of sugar can you buy if you have Rs. 225 ?  
(1) 9                                (2) 7                                (3) 6                                (4) 8
99. LCM of 20 and 50 is \_\_\_\_\_.  
(1) 2500                              (2) 250                              (3) 100                              (4) 1000
100. What is the Roman Numeral for 33 ?  
(1) XXXIII                              (2) XXVII                              (3) XXXVI                              (4) XXXIVI
101. 3-pieces of pastries costs Rs. 345. What is the cost of one dozen pastries ?  
(1) Rs. 1320                              (2) Rs. 1480                              (3) Rs. 1420                              (4) Rs. 1380
102. In the Pythagoras theorem, the triangle must be ..... ?  
(1) Acute angle                              (2) Right angle                              (3) Obtuse angle                              (4) Isosceles
103. A quadrilateral has \_\_\_\_\_ vertices and \_\_\_\_\_ sides.  
(1) 3, 3                                (2) 4, 4                                (3) 4, 3                                (4) 3, 4
104. Find the perimeter of a triangular park of sides 30 m, 50 m and 55 m.  
(1) 130 m                              (2) 110 m                              (3) 135 m                              (4) 145 m
105. The product of two numbers is 601380. If one number is 257, then what is the other number?  
(1) 234                                (2) 254                                (3) 2340                                (4) 2540
106. First four multiples of 7 are:  
(1) 7, 9, 11, 13                              (2) 35, 42, 49, 56                              (3) 1, 2, 3, 5                              (4) 7, 14, 21, 28
107. 37 and 73 are \_\_\_\_\_ numbers.  
(1) Prime triplet                              (2) Twin primes                              (3) Co primes                              (4) Composite

108. Manjot bought 450 gms of Amul Butter and 250 gms of mother dairy butter. How much butter in kg she bought?
- (1) 0.5 kg                      (2) 0.05 kg                      (3) 7 kg                      (4) 0.7 kg
109. A rectangle has length of 30 m and area  $150 \text{ m}^2$ . What is the width of the rectangle?
- (1) 5 m                      (2) 45 m                      (3) 50 m                      (4) 120 m
110. Neena had 13.34 m of ribbon. She cut four smaller pieces each of length 0.32 m from it. How many meters of ribbon were left?
- (1) 12.06 m                      (2) 12 m                      (3) 1.2 m                      (4) 12.6 m
111. How many even factors does '12' has.
- (1) 4                      (2) 6                      (3) 2                      (4) 5
112. Seven thousand nine hundred is the same as \_\_\_\_\_.
- (1) 7900                      (2) 7090                      (3) 7009                      (4) 9700
113. Tank A contains 6 times as much water as Tank B. How much water must Mohan transfer from Tank A to Tank B so that each tank contains 70 litres of water?
- (1) 50 litres                      (2) 60 litres                      (3) 75 litres                      (4) 120 litres
114. If area of rectangle is  $147 \text{ cm}^2$  and its breadth is 7 cm. Find its length.
- (1) 71 cm                      (2) 27 cm                      (3) 21 cm                      (4) 42 cm
115.  $642 \times 50 = \underline{\hspace{2cm}}$ .
- (1) 31200                      (2) 32100                      (3) 12300                      (4) 33100
116. \$ is twice the difference between the 10<sup>th</sup> and the 6<sup>th</sup> multiple of 7. Find \$?
- (1) 38                      (2) 56                      (3) 60                      (4) 28
117. Write fifty-five million sixty-four thousand forty nine in figure.
- (1) 55,640,049                      (2) 55,640,409                      (3) 55,064,049                      (4) 55,064,409
118. Convert: 2 metres to centimetres ?
- (1) 200 centimetres                      (2) 0.02 centimetres  
(3) 0.002 centimetres                      (4) 20 centimetres
119. A \_\_\_\_\_ is bounded by three line segments.
- (1) rectangle                      (2) circle                      (3) square                      (4) triangle
120. A ..... is useful tool to measure an angle.
- (1) Protractor                      (2) Scale                      (3) Compass                      (4) Ruler

## SAMPLE PAPER ANSWER KEY

|    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Q. | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| A. | 1   | 2   | 1   | 3   | 4   | 1   | 2   | 2   | 1   | 4   | 1   | 3   | 2   | 3   | 4   | 1   | 3   | 2   | 4   | 3   |
| Q. | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  |
| A. | 1   | 3   | 3   | 3   | 2   | 1   | 4   | 4   | 2   | 1   | 1   | 3   | 4   | 3   | 3   | 2   | 3   | 3   | 2   | 3   |
| Q. | 41  | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  |
| A. | 1   | 3   | 3   | 3   | 4   | 1   | 1   | 3   | 1   | 3   | 1   | 3   | 3   | 2   | 3   | 2   | 3   | 4   | 2   | 2   |
| Q. | 61  | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  | 71  | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  |
| A. | 2   | 3   | 1   | 4   | 1   | 4   | 2   | 4   | 1   | 2   | 4   | 3   | 4   | 2   | 3   | 4   | 3   | 2   | 1   | 4   |
| Q. | 81  | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | 91  | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100 |
| A. | 2   | 2   | 4   | 3   | 1   | 2   | 3   | 3   | 2   | 1   | 2   | 4   | 1   | 1   | 3   | 2   | 1   | 1   | 3   | 1   |
| Q. | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| A. | 4   | 2   | 2   | 3   | 3   | 4   | 3   | 4   | 1   | 1   | 1   | 1   | 1   | 3   | 2   | 2   | 3   | 1   | 4   | 1   |