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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. Select the combination of numbers so that the letters arranged accordingly will form a meaningful word :

L B T A E
1 2 3 4 5

- (1) 3,4,1,2,5 (2) 3,4,2,1,5 (3) 3,4,2,5,1 (4) 3,1,2,4,5

2. If in a certain code language DRAWER is coded as BSEFX then how PENCIL is coded in that language ?

- (1) OFQMJD (2) ODOMHD (3) OEQNJD (4) OFQMKE

3. Which direction will you face if you start facing East and make $\frac{3}{8}$ of a revolution clockwise.

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

4. Find the mirror image of 'CLASS06'

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

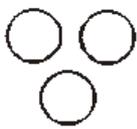
5. Find the missing number in the series given below : 4, 9, 19, 34, 54, ?

- (1) 66 (2) 75 (3) 79 (4) 84

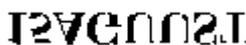
6. In a March Past, seven persons are standing in a row. Q is standing left to R but right to P. O is standing right to N and left to P. Similarly, S is standing right to R and left to T. Find out who is standing in the middle.

- (1) P (2) Q (3) R (4) O

7. Which of the following diagrams indicates the best relation between Mother, Doctor and Widows ?

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

8. Find the water image of '15AUGUST'.

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

9. Which one word can't be made from the letters of the word 'AMPHITHEATER'?

- (1) METER (2) TEETH (3) EXTEND (4) THEME

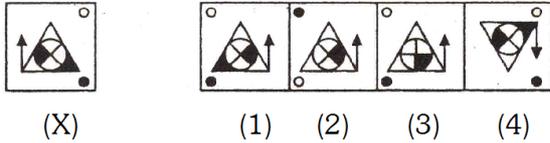
10. If BAD = 42 and DIG = 120 then HALF will be equal to :-

- (1) 180 (2) 162 (3) 140 (4) 160

11. A cat runs 5 m towards East and turns to right, runs 10 m and turns to right run 8 m and again turns to left, runs 5 m and then turns to left, runs 11 m and finally turns to left and runs 6 m. Now, which direction is the cat facing ?

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

12. Choose the correct mirror image from alternatives (1), (2), (3) and (4) of the figure (X).



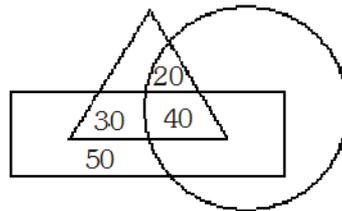
13. Find the next term in the series. 3, 7, 13, 27, 53,

- (1) 100 (2) 105 (3) 126 (4) 107

14. Five persons A, B, C, D and E are sitting facing south. B is sitting in middle, C and E are adjacent to B and A is on the extreme right of B. Then, who is sitting on extreme left of B ?

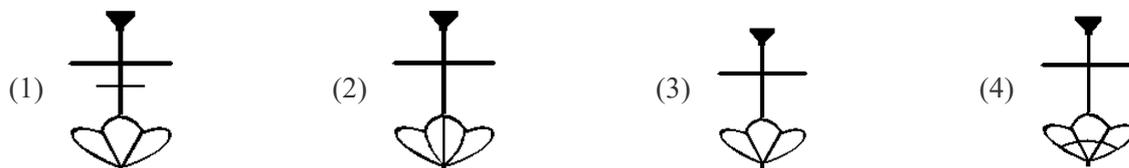
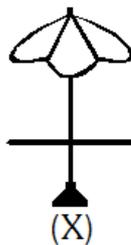
- (1) C (2) D (3) E (4) A

15. In the given figure if Triangle represents healthy people, Rectangle represents old persons and Circle represents men then What is the number of those men who are healthy but not old ?



- (1) 30 (2) 40 (3) 60 (4) 20

16. Choose the correct water image of fig. (X) from the given alternatives.



17. X is to the South-West of Y, L is to the east of X. In which direction of Y is L ?

- (1) South-East (2) South-West
(3) North-East (4) Can't be determined

18. Find the mirror image of 'QWERTY'.

(1) YTRƎWQ

(2) YTRƎƆ

(3) YTRƎƆ

(4) YTRƎƆ

19. Find the missing term in the following series.

ALPHABET, ALPHABE, LPHABE, LPHAB, ?

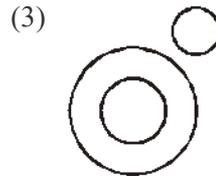
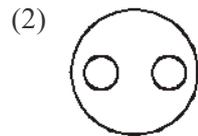
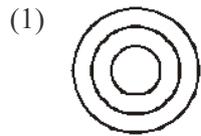
(1) PHAB

(2) LPHA

(3) PHAL

(4) LPAB

20. Which of the following diagrams indicates the best relation between Animals, Mammals and Frog ?



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.

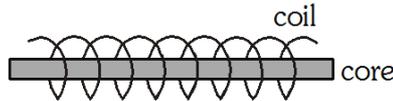
21. The main function of a switch is to :

- (1) Allow charges to flow (2) Complete or break a circuit
(3) Make the bulb glow easily (4) Prevent electric shocks

22. Mirrors can also be made with curved surfaces. If they 'curve in', they are called _____. If they 'curve out', they are called _____.

- (1) plane; convex (2) concave, plane
(3) concave; convex (4) convex, concave

23. In given figure, if it is a good electromagnet then the core must be of :



- (1) wood (2) plastic (3) soft iron (4) rubber

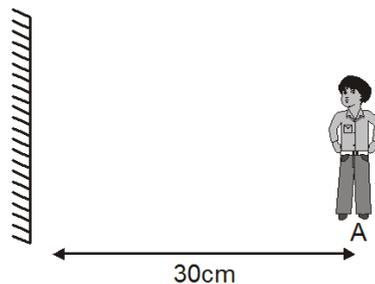
24. A car is moving on a straight road, then motion of its wheel is :-

- (1) Pure rotational motion (2) Pure translational motion
(3) Rolling motion (4) Vibratory motion

25. Which of the following is most suitable material for the core of an electromagnet :

- (1) Air (2) Soft iron (3) Wood (4) Cu-Ni alloy

26. A is 30cm away from a plane mirror. It moves 10cm towards the mirror, then what would be the distance between A and it's image?



- (1) 40cm (2) 20cm (3) 60cm (4) 30cm

27. Magnetic poles :-

- (1) Always exist in pairs (2) May exist separately
(3) Always exist separately (4) Can be found on electron

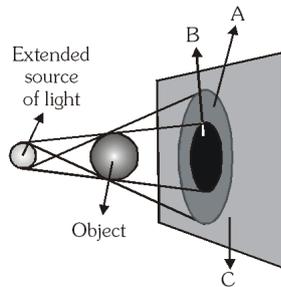
28. Motion in a straight line is called ___ motion.

- (1) Rectilinear (2) Curvilinear (3) Rotational (4) Circular

37. Electric wires are covered with plastic or bakelite because :

- (1) Plastic / bakelite is a good conductor of electricity
- (2) Plastic / bakelite is a bad conductor of electricity
- (3) Just for decoration
- (4) To make it expensive

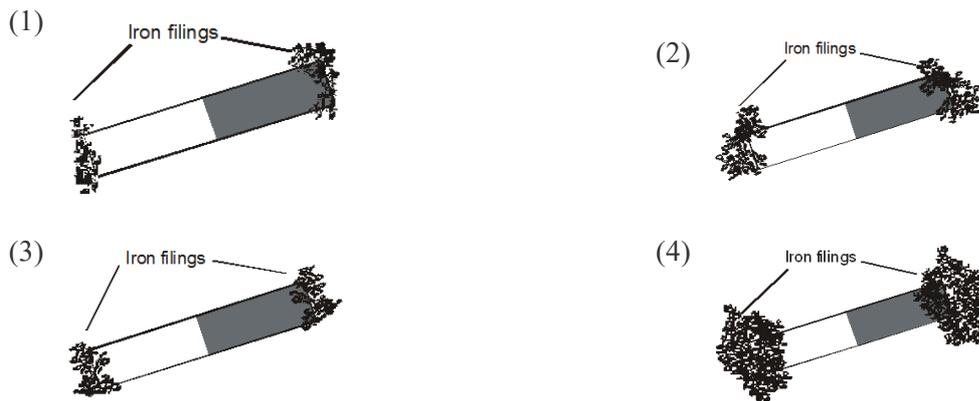
38. Figure given below shows the formation of shadow by an extended source of light.



The portion B represents :

- (1) Image
- (2) Penumbra
- (3) Umbra
- (4) Reflection

39. Which of the following figure shows the strongest magnet ?



40. In 10 minutes, a car with speed of 60 kmh^{-1} travels a distance of :

- (1) 6 km
- (2) 600 km
- (3) 10 km
- (4) 7 km

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. Identify the gas which is odourless, colourless, heavier than air and supports combustion.
- (1) Nitrogen (2) Oxygen (3) Carbon dioxide (4) Water vapours
42. Which of the statement is true :
- (1) Aerated drink, e.g. coca cola is a mixture (2) Brass is an element
(3) Air is a heterogeneous mixture (4) Mist is a homogenous mixture
43. Which of the following is a reversible change ?
- (1) Curdling of milk (2) Ripening of fruits
(3) Melting of ice (4) Burning of wood
44. Which of the following type of bodies form sharp shadow when placed in the path of light ?
- (1) Transparent (2) Translucent
(3) Transparent and Translucent (4) Opaque
45. Separation of seeds from cotton balls is called :
- (1) Winnowing (2) Weaving (3) Ginning (4) Spinning
46. Water is called as the Universal solvent because :-
- (1) It dissolves in most of the liquids (2) It can dissolve most of the substances
(3) It contains many salts and minerals (4) It can exist in three states
47. Which of the following method used to separate two immiscible liquids ?
- (1) Separating funnel (2) Sieving
(3) Winnowing (4) Sublimation
48. When ammonium chloride is heated, it turns directly into the vapour state, that process is called :
- (1) Sublimation (2) Condensation (3) Melting (4) Freezing
49. Materials having lustre are :
- (1) Gold, silver, copper, iron (2) Wood, cardboard, chalk, Iron
(3) Paper, gold, plastic, rubber (4) Iron, aluminium, chalk, wood
50. 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

51. Global warming takes place due to increase of _____ in air.
- (1) Nitrogen (2) Carbon dioxide
(3) Oxygen (4) Carbon monoxide
52. Which method is used to separate heavier and lighter components in a mixture by wind ?
- (1) Winnowing (2) Magnetic separation
(3) Hand picking (4) Sieving
53. A change is called a chemical change when it involves-
- (1) Reversible change
(2) The production of no new substance
(3) The production of new substances with different molecular structure.
(4) An interaction between chemical substances.
54. Which one will show metallic lusture ?
- (1) Any surface of a element (2) Freshly cut surface of a metal
(3) Freshly cut surface of non-metal (4) Surfaces of all materials
55. Weaving is :
- (1) Separating seeds from cotton balls
(2) Spinning of yarns
(3) Arranging two sets of yarns together to make a fabric
(4) Immersing stems of jute plant in water
56. The water fit for drinking is called –
- (1) River water (2) Rain water (3) Potable water (4) Ground water
57. The process of settling down of the particles of an insoluble solid in a liquid is called
- (1) Decantation (2) Sedimentation (3) Winnowing (4) Sieving
58. An iron ring is heated. Which of the following statement about it is incorrect ?
- (1) The ring expands.
(2) The ring almost comes to the same size on cooling.
(3) The change in this case is reversed.
(4) The ring changes its shape and the change cannot be reversed.
59. A solid is said to be crystalline when :
- (1) It possesses a definite geometrical shape (2) It has no definite shape
(3) It has definite colour (4) It has no definite colour
60. What is the process called that changes fibres into yarn ?
- (1) Knitting (2) Bonding (3) Spinning (4) Weaving

BIOLOGY

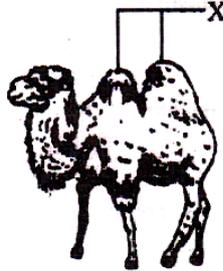
This section contains **20 Multiple Choice Questions**. Each question has four choices (1), (2), (3) and (4) out of which **ONLY ONE** is correct.

-
61. Banana has which type of roots ?
 (1) Tap roots (2) Fibrous roots (3) Lateral roots (4) None
62. Aquatic animal, whose skeleton is made up of entirely cartilage ?
 (1) Whale (2) Shark (3) Dolphin (4) Sea horse
63. Which adaptation helps the cactus plant to minimize loss of water :-
 (1) Needle like leaves (2) Broad leaves
 (3) Branched stem (4) Fibrous roots
64. Which of the following structure helps the redworms to grind their food ?
 (1) Mouth (2) Tongue (3) Teeth (4) Gizzard
65. Excessive body weight due to over nutrition leads to :-
 (1) Rickets (2) Anaemia (3) Marasmus (4) Obesity
66. Which of the plants have Tap root system ?
 (1) Marigold, Tulsi, Gram, Carrot (2) Raddish, Turnip, Rice, Corn
 (3) Raddish, Wheat, Rice, Corn (4) Turnip, Wheat, Tulsi, Corn
67. How many vertebrae are there in our backbone ?
 (1) 50 (2) 20 (3) 25 (4) 33
68. Organisms which can not prepare their own food are :-
 (1) Phototrophs (2) Heterotrophs (3) Autotrophs (4) None of these
69. Which kind of material are to be collected in green coloured bins ?
 (1) only plastics (2) only metals (3) only glass (4) banana peel
70. Stream lined body is found in a :
 (1) Snail (2) Jelly fish (3) Earthworm (4) Fish
71. An organism X has hair on its body. It gives birth to young one that feed on their mother's milk. Which organism is X ?
 (1) Rabbit (2) Tortoise (3) Lizard (4) Crocodile
72. How many of the followings help in recycling of minerals in nature Bacteria, Earthworms, Fungi, Lion
 (1) 3 (2) 2 (3) 4 (4) 1
73. What structure found on plants increases the surface area of the root ?
 (1) Stomata (2) Root hairs (3) Guard cells (4) Root cap

74. Which of the following animal moves with the help of muscular foot ?



75. What is the function of the part labelled as 'X' in the given figure ?



- (1) To protect the camel from its enemy
- (2) To store fat to be used when food becomes scarce in the desert
- (3) To provide a place to put the saddle on
- (4) To allow the sand to slide off the body of the camel

76. When some things in garbage rots completely and did not smell, it –

- (1) becomes manure
- (2) can be mixed with soil to provide nutrients to plants
- (3) both the above are correct
- (4) none of the above are correct

77. A person with bleeding gums should daily take :-

- (1) milk
- (2) lemons
- (3) carrots
- (4) butter

78. The given figure shows a particular joint. Identify the organ in which it is present.



- (1) Shoulder
- (2) Elbow
- (3) Ankle
- (4) Knees

79. Grassland is the example of which habitat :-

- (1) Terrestrial
- (2) Aquatic
- (3) Arboreal
- (4) Marine

80. Which one of the following is a good source for making compost ?

- (1) aluminium foil
- (2) vegetable peels
- (3) polythene
- (4) plastic toy

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.

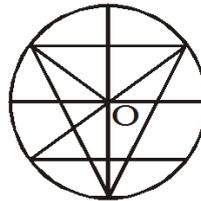
81. Find the value of the expression $Z + 37$ when $Z = 29$
- (1) 122 (2) 65 (3) 79 (4) 66
82. The incomplete pictograph shows the number of points obtained by four teams.

Team W	
Team X	☺ ☺ ☺ ☺
Team Y	☺ ☺
Team Z	☺ ☺ ☺ ☺ ☺

☺ represent 2 points

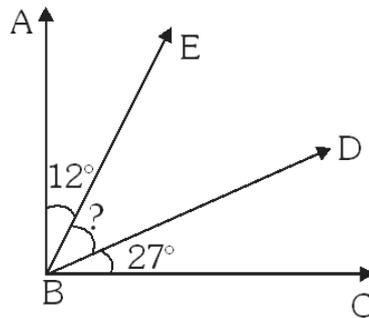
Team W has the highest score with 8 points more than the team with the second highest score. How many points does team W score ?

- (1) 4 (2) 12 (3) 16 (4) 18
83. In the figure shown below, how many line segments represent the diameters of the circle with centre O ?

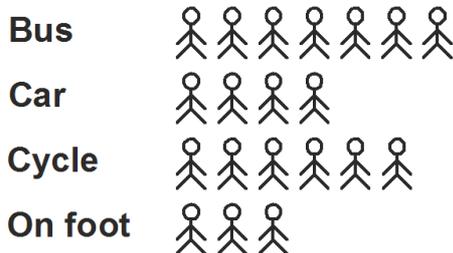


- (1) 2 (2) 3 (3) 4 (4) 5
84. Which of the following set of numbers is in descending order ?
- (1) $2 > -2 > 1 > -1$ (2) $0 > 1 > 2 > 3$
 (3) $1 > 0 > -1 > -2$ (4) $-3 > -2 > -1 > 0$
85. The fraction to be added to $6\frac{7}{15}$ to get $8\frac{1}{5}$ is equal to :
- (1) $\frac{11}{15}$ (2) $1\frac{11}{15}$ (3) $\frac{44}{3}$ (4) $\frac{3}{44}$
86. Parminder walks around a square park and covers a distance of 800m. What is the area of the square park ?
- (1) 40000 m^2 (2) 40000 cm^2 (3) 400 m^2 (4) 4000 m^2
87. Number of lines of symmetry in a scalene triangle is :
- (1) 0 (2) 1 (3) 2 (4) 3
88. The fraction equivalent to $\frac{5}{7}$ is :
- (1) $\frac{25}{28}$ (2) $\frac{35}{49}$ (3) $\frac{15}{14}$ (4) $\frac{40}{63}$

89. The number of members in 20 families in a village is given as 6, 8, 6, 3, 2, 5, 7, 8, 6, 5, 5, 7, 7, 8, 6, 6, 7, 7, 6, 5. How many families are of the largest size ?
 (1) 4 (2) 3 (3) 5 (4) 6
90. Asha bought 5 kg 350 g potatoes, 3 kg 725 g tomatoes and 2 kg 475 g onions. Find the total weight of vegetables.
 (1) 10.550 kg (2) 11.550 kg (3) 9 kg (4) 9.55 kg
91. Which type of angle has a measure that is smaller than a right angle ?
 (1) Acute (2) Obtuse (3) Straight (4) Reflex
92. The length & breadth of a rectangular field are 25 m & 10 m respectively. What is its perimeter ?
 (1) 250 m (2) 35 m (3) 70 m (4) 5 m
93. The least number which when decreased by 9 is exactly divisible by 12, 16, 24, and 48 is _____.
 (1) 16 (2) 48 (3) 57 (4) 39
94. In the given figure (not drawn to scale), ABC is a right angle. Find $\angle DBE$.



- (1) 51° (2) 52° (3) 54° (4) 55°
95. The expression $3xy - y^2 + 3y^2z + 79z$ is a :
 (1) Monomial (2) Binomial (3) Trinomial (4) Polynomial
96. The pictograph represent different modes of transportation and number of students of a school travelling by those are shown :



“One shape of a student represent 10 student”.

How many students are there in the school in all ?

- (1) 150 (2) 120 (3) 200 (4) 140
97. Which of the following is a line segment ?
 (1) Road (2) Edge of carromboard
 (3) Beam of light (4) Height of water in an ocean

98. How many integers are there between -6 and 6 ?
 (1) 11 (2) 10 (3) 13 (4) 8
99. What is the value of $\frac{1}{2} + \frac{3}{2} + \frac{4}{5} + 1$
 (1) $\frac{18}{5}$ (2) $\frac{19}{5}$ (3) $\frac{20}{5}$ (4) $\frac{21}{5}$
100. How many square slabs of side 90 cm are required to cover a floor of area 81 m^2 ?
 (1) 100 (2) 1000 (3) 10 (4) 80
101. Which figure has more than 4 lines of symmetry
 (1) Rectangle (2) Equilateral triangle
 (3) Trapezium (4) Circle
102. A box has 25 balls of which 9 are red and rest yellow. Aniket picks one third of the red balls and half of the yellow balls. What fraction of the balls is left in the box ?
 (1) $\frac{11}{16}$ (2) $\frac{11}{25}$ (3) $\frac{14}{25}$ (4) $\frac{16}{25}$
103. Study the following table which shows the production of three different types of cars over the years.

Years	Production of Car P	Production of Car Q	Production of Car R
2001	76	59	28
2002	82	62	36
2003	65	47	42
2004	70	54	31
2005	85	57	49
2006	80	68	38

The difference between the total production of three cars in the year 2004 and 2006 is _____.

- (1) 11 (2) 43 (3) 31 (4) 28
104. 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
105. This angle cannot be constructed using ruler and compass only :
 (1) 120° (2) $22\frac{1}{2}^\circ$ (3) 135° (4) 50°
106. Area of a square is :-
 (1) $\frac{1}{4} (\text{Diagonal})^2$ (2) $\frac{1}{2} (\text{Diagonal})^2$ (3) $(\text{Diagonal})^{\frac{1}{2}}$ (4) $\frac{1}{3} (\text{Diagonal})^2$

107. Divide the 15th multiple of 6 by the 3rd multiple of 3. The answer is _____.
- (1) 10 (2) 25 (3) 12 (4) 15
108. How many corners does a sphere have ?
- (1) 2 (2) 1 (3) 0 (4) 3
109. Simplify : $(x^2 - y^2 + 2xy + 1) - (x^2 + y^2 + 4xy - 5)$:-
- (1) $-2y^2 - 2xy + 6$ (2) $2y^2 + 2xy + 6$ (3) $2xy^2 - 2xy + 6$ (4) $-2y^2 - 2xy - 6$
110. Which of the following will give answer with a negative sign ?
- (1) $-48 + 79$ (2) $-40 + 40$ (3) $-48 + 30$ (4) $48 + (-39)$
111. A juice shop owner buys $42\frac{1}{2}$ kg of oranges. Out of these $20\frac{1}{4}$ kg of oranges are consumed in the morning and $19\frac{1}{3}$ kg in the evening. Find the quantity of oranges left at the end of the day.
- (1) $12\frac{2}{11}$ kg (2) $3\frac{11}{12}$ kg (3) $2\frac{11}{12}$ kg (4) $2\frac{12}{13}$ kg
112. The height of a triangle whose base is 13 cm and area is 65 cm^2 is :
- (1) 12 cm (2) 15 cm (3) 10 cm (4) 20 cm
113. What fraction of the numbers from 2 to 12 are prime numbers ?
- (1) $\frac{1}{11}$ (2) $\frac{10}{11}$ (3) $\frac{5}{11}$ (4) $\frac{6}{11}$
114. Table-I and Table-II show the number of students in some classes.

Class	No. of students
VI	4200
VII	3600
VIII	3000

Table-I

Class	No. of students
VI	■ ■ ■ ■ ■ ■ ■ ■
VIII	■ ■ ■ ■ ■ ■
VII	?

Table-II

Which of the following is the correct representation of the number of students in class VII ?

- (1) ■ ■ ■ ■ (2) ■ ■ ■ ■ ■ ■ ■ ■
- (3) ■ ■ ■ ■ ■ ■ (4) ■ ■ ■

115. Solve :
- $$\begin{array}{r} 3\text{ l } 304\text{ ml} \\ + 5\text{ l } 629\text{ ml} \\ \hline \end{array}$$
- (1) 8 l 933 ml (2) 8 l (3) 8 l 833 ml (4) 8 l 940 ml
116. Area of each square of a chess board is 4 cm^2 . Find the area of chess-board
- (1) 64 cm^2 (2) 256 cm^2 (3) 216 cm^2 (4) 200 cm^2

117. 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
118. If a, b, c are integers and $a > b$ then $a \div c$ $b \div c$, if c is negative :-
- (1) $<$ (2) $>$ (3) $=$ (4) \geq
119. Length and breadth of a rectangle are 15 cm and 8 cm respectively. Find its area :
- (1) 46 cm^2 (2) 60 cm^2 (3) 90 cm^2 (4) 120 cm^2
120. The difference in the place values of two 3s in number 437.13 is :
- (1) 30.03 (2) 30.97 (3) 20.97 (4) 29.97

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.	2	1	1	1	3	2	2	2	3	2	2	1	4	2	4	3	4	1	1	2
Q.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A.	2	3	3	3	2	1	1	1	2	1	2	3	1	1	1	2	2	3	4	3
Q.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A.	2	1	3	4	3	2	1	1	1	1	2	1	3	2	3	3	2	4	1	3
Q.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
A.	2	2	1	4	4	1	4	2	4	4	1	1	2	1	2	3	2	1	1	2
Q.	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
A.	4	4	2	3	2	1	1	2	2	2	1	3	3	1	4	3	2	1	2	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	3	3	4	2	1	3	1	3	3	3	3	2	1	2	3	1	4	4