# $10^{\mathrm{TH}}$ GOING TO $11^{\mathrm{TH}}$ IG PAPER - 2 

Time: 90 minutes

1. Each question carries +3 mark and there is negative marking (-1).

Enrolment No. : $\square$

Name:
Date of Examination:

## SECTION - I

## Straight Objective Type

This Section contains 100 multiple choice questions numbered 1 to 100. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

Directions (Q. 1 to 4): These questions are based on the information given below.
The three pairs of faces of a cube are painted in three different colours among blue, green and red. One of those pairs is a pair of adjacent faces. After painting, the cube is cut into 216 smaller but identical cubes.

1. At least how many smaller cubes have at least one of its faces painted in red?
(A) 60
(B) 72
(C) 64
(D) 66
2. At most how many smaller cubes have the faces painted in three different colours?
(A) 4
(B) 2
(C) 6
(D) 8
3. At most how many smaller cubes have at least two faces painted in different colours?
(A) 60
(B) 48
(C) 64
(D) 56
4. At most how many smaller cubes are painted in a single colour?
(A) 104
(B) 108
(C) 110
(D) 112

Directions: (Q. 5 to 6) These questions are based on the following information.
Six persons -A, B, C, D, E, F from three cities - P, Q, R are sitting around a circular table. At most two persons are from the same city. No two persons from the same city are sitting together.
(i) A is two places away to the left of $f$, who is from $P$.
(ii) B is two places away to the right of E and is opposite to a person from R .
(iii) C and D are not opposite each other.
(iv) C is to the immediate left of the person from Q .
5. $\quad \mathrm{D}$ is from which city?
(A) P
(B) Q
(C) R
(D) Either (A) or (B)
6. A is from which city?
(A) P
(B) R
(C) $Q$
(D) Either (A) or (B)

Directions: (Q. 7-12) In each of the following question, there is a certain relationship between two given words/numbers on one side of : : and one word is given on another side of : : while another word/number is to be found from the given alternatives, having the same relation with the given pair bear. Choose the correct alternative.
7. Ornithologist : birds : : Anthropologist : - - -
(A) Mankind
(B) Animals
(C) Insects
(D) Minerals
8. Chess : bishop : : ship : - - -
(A) Mast
(B) Captain
(C) Sea
(D) Water
9. $468: 163664:: 579:-$ -
(A) 254981
(B) 259481
(C) 294981
(D) 298941
10. $\mathrm{P}: \mathrm{K}:: \mathrm{R}:---$
(A) I
(B) N
(C) J
(D) H
11. SOLID : WPSLPIMFHA : : ? : ATEXXQIBVO
(A) EAGER
(B) WAFER
(C) WAGER
(D) WATER
12. MONKEY : XDJMNL : : TIGER : ?
(A) SDFHS
(B) SHFDQ
(C) QDFHS
(D) UJHFS

Directions (Q. 13-17): In each question below is given a group of letters followed by four combinations of digits/symbols numbered (A), (B), (C) and (D). You have to find out which of the combinations correctly represents the group of letters based on the following coding system and the conditions that follow and mark the number of that combination as your answer.

## Letter:

PMKEAIZTRUBFNVD
Digit/symbol code:
\$314@25 © $87 \delta 6 \%$ \# 9
Conditions:
(i) If the first letter is a vowel and the last letter is a consonant both are to be coded as $\star$.
(ii) If the first letter is a consonant and the last letter is a vowel their codes are to be interchanged.
(iii) If both the first and the last letters are vowels both are to be coded as the first letter.
13. IFNVDE :
(A) $26 \%$ \# 92
(B) $46 \% \# 92$
(C) $46 \% \# 94$
(D) $\star 6 \% \# 9 \star$
14. KEIMPD :
(A) $9423 \$ 1$
(B) $1423 \$ 9$
(C) $9423 \$ 9$
(D) $1423 \$ 1$
15. UBTIZN :
(A) $78 \odot 25 \%$
(B) $\% 8 \odot 257$
(C) $\star \delta \odot 25 \star$
(D) $78 \odot 257$
16. BAEFNP:
(A) $\delta @ 46 \% \delta$
(B) $\$ @ 46 \% \delta$
(C) $\star$ @ $46 \% \star$
(D) $\delta @ 46 \% \$$
17. RKPZFI:
(A) $81 \$ 562$
(B) $81 \$ 568$
(C) $21 \$ 562$
(D) $21 \$ 568$

Directions (Q. 18-23): Find the odd man out.
18. (A) 350
(B) 520
(C) 738
(D) 218
19.
(A) dove
(B) pigeon
(C) kiwi
(D) sparrow
20.
(A) April
(B) July
(C) May
(D) August
21.
(A) 2 L 4
(B) 3 J 2
(C) 5 R 4
(D) 6 U 5
22.
(A) DP
(B) FX
(C) BH
(D) GN
23.
(A) LJG
(B) PNK
(C) SQM
(D) DBY

Directions (Q. 24 - 27): In each of the following questions, a statement/group of statements is given followed by some conclusions. Without resolving anything yourself, choose the conclusion which logically follows from the given statement(s).
24. Statement : Most dresses in that shop are expensive.

Conclusions:
(A) There are no cheap dresses available in that shop.
(B) Handloom dresses in that shop are cheap.
(C) There are cheap dresses also in that shop.
(D) Some dresses in that shop are expensive.
25. Statement : Ability is poor man's wealth.

Conclusions :
(A) A poor man is always able.
(B) A poor man has the ability to earn wealth.
(C) A wealthy man is always able.
(D) A poor man can earn wealth if he has ability.
26. Statement:
(i) I watch T. V. only if I am bored.
(ii) I am never bored when I have my brother's company.
(iii) Whenever I go to the theatre I take my brother along.

Conclusions:
(A) If I am bored, I seek my brother's company.
(B) If I am not bored, I do not watch T.V.
(C) If I am not bored, I watch T.V.
(D) If I am not with my brother then I watch T.V.
27. Statement : Many creative persons become artists.

Conclusions :
(A) A creative person will certainly become an artist.
(B) It is not possible to become an artist without creativity.
(C) A high level of creativity is needed to become an artist.
(D) Some artists are creative persons.
28. If the time in a clock is 4 hours 45 minutes, then what time does, it shows on the mirror?
(A) 9 hours 20 minutes
(B) 7 hours 45 minutes
(C) 7 hours 15 minutes
(D) 7 hours 20 minutes
29. What is the angle between the two hands of a clock, when the clock shows 3 hours 25 minutes?
(A) $47 \frac{1}{2}$ 。
(B) $46 \frac{1}{2}^{\circ}$
(C) $45 \frac{1}{2}^{\circ}$
(D) $48 \frac{1}{2}^{\circ}$
30. Which among the following years is a leap year?
(A) 2500
(B) 2600
(C) 2700
(D) 2800

## Space for rough work

31. One evening, two friends Shiva and Priya were talking to each other with their face towards each other, sitting in a park, If Shiva's shadow was exactly to the left of her, then which direction was Priya facing?
(A) north
(B) south
(C) east
(D) west
32. Chintu walks 8 km towards north and then he turns right and walks a further 6 km . How far and in which direction is he from the starting point?
(A) 10km towards north-west
(B) 10 km towards north-east
(C) 14 km towards north-west
(D) 14 km towards north-east
33. My mother's father's only daughter's only son is related to me as
(A) brother
(B) my self
(C) either A or B
(D) neither A nor B
34. Looking at a portrait of a man, Harsh said, "His mother is the wife of my father's son. Brothers and Sisters I have none." At whose portrait was Harsh looking?
(A) His son
(B) His cousin
(C) His uncle
(D) His nephew

Directions (Q. $35-39$ ): These questions are based on the following diagram. Triangle represents the people who are cricketers; rectangle represents the people who are tennis players; Square represents the people who are football players and Circle represents the people who are basket ball players.

35. Which of the following letters represent the people who are cricketers and tennis players, but should be neither foot ball players nor basket ball players?
(A) T
(B) X
(C) Q
(D) No such players
36. Which of the following letters represents the people who are cricketers, tennis players as well as foot ball players but not basket bell players?
(A) T
(B) S
(C) X
(D) none of these
37. Which of the following letters represents the cricketers who play foot ball, but neither they play basket ball nor tennis?
(A) S
(B) R
(C) Y
(D) Q
38. Which of the following letters represents the people who play tennis?
(A) A, B, T, Y, Z
(B) T, X, Y, Z
(C) A, B, T, X, Y, Z
(D) $X, Y, Z, A, B$
39. Which of the following letters represents the people who play only foot ball?
(A) Q, S, T, U, W, X, Y, Z
(B) S, T, W, Y
(C) U
(D) Q
40. If ' $A$ ' stands for ' $X$ ', ' $B$ ' stands for ' + ' ' $C$ ' stands for ' - ' and ' $D$ ' stands for ' $\div$ ' the value of 6 B 6 C 6 A 6 D $6=---$
(A) 36
(B) 18
(C) 6
(D) 1
41. $a b a-b a c a-b a-b a c a a b a c-a c a$
(A) abcb
(B) cabc
(C) ccab
(D) cacb
42. $a-b c-a a b-c c a a-b c c-a b$
(A) abcca
(B) aacbc
(C) bacab
(D) bcbba

Directions (Q. 43-46): Read the following information
(i) A cube has six sides each of different colours.
(ii) The red side is opposite to black side.
(iii) The green side is adjacent to red and black.
(iv) The white side is adjacent to brown.
(v) The brown side is adjacent to blue.
(vi) The red side is face down.
43. The side is opposite to brown is
(A) Red
(B) Green
(C) White
(D) Blue
44. The Four colours adjacent to green are:
(A) red, black, brown and white
(B) red, black, brown and blue
(C) red, black, blue and white
(D) red, black, blue and brown
45. The side which is facing up is:
(A) black
(B) brown
(C) blue
(D) white
46. Side opposite to blue is:
(A) black
(B) white
(C) green
(D) brown
47. In a certain code language, 'pic vic nic' means 'winter is cold', 'to nic re' meang 'summer is not', 're pic boo' means 'winter and summer' and 'vic tho pa' means 'nights are cold'. Which word in that language represents 'summer'?
(A) pic
(B) boo
(C) re
(D) to
48. In a cartain code 'BCG' means oranges are sweet', 'KUB' means 'buy good oranges' and 'BGL' means 'red sweet oranges'. Which letter in that code means 'good'?
(A) K
(B) $U$
(C) Either (A) or (B)
(D) can't say
49. Ramya ranks twenty-first in a class of fifty one. What is her rank from the last?
(A) 30
(B) 32
(C) 31
(D) 29

Directions (Q. 50 - 54): study the following arrangement carefully and answer the questions given below.
RD 15 E \% K 3 JI 9 P 8 \# A 2 B SKM 6 W@N 4 © T * 7 FH
50. Which of the following is the third to the right of the thirteen from the left end?
(A) A
(B) B
(C) 2
(D) S
51. Which of the following is seventh to the right of the nineteen from the right end?
(A) K
(B) 6
(C) M
(D) E
52. How many such numbers are there in the above arrangement, each of which is immediately preceded by a consonant and immediately followed by a symbol?
(A) one
(B) two
(C) three
(D) four

## Space for rough work

53. How many such consonants are there in the above arrangement, each of which is immediately preceded by a symbol and immediately followed by a number?
(A) one
(B) two
(C) three
(D) four
54. What should come in place of question mark in the following series based on the above arrangement? D5\% J98 2SM ?
(A) @4T
(B) @4®
(C) 6@4
(D) $\mathrm{WN} \subset$

Directions (Q. 55 - 56): Rakesh is shorter than Rajesh, Raju is taller than Rakesh, Sunny is taller than Rajesh but shorter than Bunny, Rajesh is taller than Raju.
55. Who will be in the middle if they stand in a row according to height?
(A) Raju
(B) Sunny
(C) Bunny
(D) Rajesh
56. Who is tallest among them?
(A) Sunny
(B) Bunny
(C) Rajesh
(D) Rakesh

Directions: (Q. 57-62) In each of the following questions, the numbers have been arranged according to the pattern shown in the sample figure given below.
57. The number of squares that can be drawn by joining the centers of all the circles in the diagram is
(A) 13
(B) 6
(C) 8
(D) 10

58.

| 3 | 5 | 7 |
| :---: | :---: | :---: |
| 4 | 12 | 24 |
| 5 | $?$ | 25 |

$\begin{array}{ll}\text { (A) } 14 & \text { (B) } 16\end{array}$
(C) 15
(D) 13
59.

(A) 210
(B) 217
(C) 190
(D) 188
60.

| $F$ | $H$ | $K$ | $O$ | $T$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $G$ | $J$ | $N$ | $S$ | $?$ |  |
| (A) Z |  |  |  |  |  |
| (B) X |  |  |  |  |  |

(C) Y
(D) W
61.

(A) 61
(B) 65
(C) 74
(D) 62
62.

| $D$ | $F$ | $H$ | $J$ | $L$ |
| :---: | :---: | :---: | :---: | :---: |
| $C$ | $H$ | $E$ | $N$ | $?$ |

(C) I
(D) F

Directions (Q. 63 - 67): Study the following information carefully and answer the questions given below. Eight family members Dhiruv, Garima, Avinash, Varsha, Aakash, Deepti, Charu and Moksha are sitting around a square table in such a way that two persons sit on each of the four sides of the table facing the centre. Members sitting on opposite sides are exactly opposite to each other.

Aakash and Garima are exactly opposite to each other. Deepti is immediately right to Garima. Dhiruv and Moksha are sitting on the same side, Moksha is exactly opposite of Avinash who is to the immediate left of Varsha. Dhiruv is towards right of Deepti.
63. Who is sitting opposite to Dhiruv?
(A) Charu
(B) Deepti
(C) Varsha
(D) Moksha
64. Who is sitting opposite to Deepti?
(A) Moksha
(B) Charu
(C) Varsha
(D) none of these
65. Which of the following pairs of persons are sitting on the same side?
(A) Garima and Moksha
(B) Varsha and Charu
(C) Avinash and Deepthi
(D) Akash and Charu
66. Who is immediate right to Avinash
(A) Varsha
(B) Aakash
(C) Avinash
(D) Charu
67. Who is next to Dhiruv in anti-clock wise direction?
(A) Moksha
(B) Deepti
(C) Garima
(D) Avinash

Directions (Q.68-72): In each of the following questions, you are given a figure $(X)$ followed by four alternative (A), (B), (C) and (D) such that figure (X) is embedded in one of them. Trace out the alternative figure which contains figure $(X)$ as its part.
68.

(x)


69.

(x)

70.

71.

72.


Directions (Q.73-77): Three different positions $X, Y$ and $Z$ of a dice are shown in the figures given below. Answer the following question which is based upon these figures.

73. Which number lies at the bottom face in position $X$ ?
(A) 2
(B) 3
(C) 6
(D) can not be determined
74. Which number lies at the bottom face in position $Y$ ?
(A) 1
(B) 2
(C) 5
(D) can not the determined
75. Which number lies opposite to 6 ?
(A) 1
(B) 2
(C) 4
(D) 5
76. Which numbers are hidden behind the numbers 6 and 5 in the position $Z$ ?
(A) 1 and 4
(B) 1 and 3
(C) 4 and 3
(D) 1 and 2
77. Which of the hidden numbers adjacent to 5 in position $X$ is /are common to the hidden numbers adjacent to 5 in position Z?
(A) 1 and 4
(B) 2
(C) 6
(D) none

Directions (Q.78-79): Study the following number sequence and answer the questions given below it 51473985726315863852243496
78. How many odd numbers are there in the sequence which are immediately followed by an odd number?
(A) 2
(B) 3
(C) 4
(D) more than 4
79. How many even numbers are there in the sequence which are immediately preceded by an odd number but immediately followed by an even number?
(A) 1
(B) 2
(C) 3
(D) 4
80. A man had returned after a day's bird shooting. He was asked how many birds he has in the bag. He said, "They are all sparrows but six, all pigeons but six, and all doves but six," How many birds had he in all?
(A) 7
(B) 8
(C) 9
(D) 10

Directions (Q. 81 - 85): These questions are based on following information:
Six friends $P, Q, R, S, T$ and $U$ are sitting around a circular table as per the following conditions. $U$ is sitting to the left of $P . Q$ is sitting between $R$ and $T$ and is opposite to $P$. $T$ is sitting to the right of $S$.
81. Who is sitting opposite to ' $R$ '?
(A) T
(B) P
(C) S
(D) U
82. Who is sitting to the left of $Q$ ?
(A) R
(B) S
(C) T
(D) can't be determined
83. If ' $T$ ' interchanges his place with the person sitting opposite to $Q$, who sits to the right of $U$ ?
(A) P
(B) Q
(C) R
(D) none of these
84. If each person interchanges his place with the person opposite to himself, then who is sitting to the right of $R$ ?
(A) R
(B) Q
(C) P
(D) T
85. If ' $P$ ' interchanges his place with ' $S$ ', $U$ interchanges with $T$ and $Q$ interchanges with $R$, then which of the following statements must be true?
(A) $P$ is to the right of $U$
(B) There are two persons sitting between $Q$ and $S$
(C) $R$ and $S$ sit opposite each other
(D) T sits to the right of U

Directions (Q. 86 - 90): Each of the following questions consists of five problem figures followed by four answer figures marked A, B, C and D. Select a figure amongst the answer figures which will continue the same series as established by problem figures:
86.

87.

(1)
(2)
(3)
(4)
(5)

(A)
(B)
(C)
(D)
88.

(1)
(2)
(3)
(4)
(5)

(A)
(B)
89.

(1)
(2)
(3)
(4)
(5)

(A)
(B)
(C)
(D)
90.

(1)
(2)
(3)
(4)
(5)

(A)
(B)
(C)
(D)

Space for rough work

Directions (Q. 91-95): These questions are based on the following information.
A total of 40 apples are distributed among A, B, C, D, E and F. The number of apples with A, B, C, D, E and F are in decreasing order. Further we know the following information.
(i) The number of apples with $B$ is twice that with the $D$.
(ii) The number of apples with C is thrice that with the E .
(iii) The difference in the number of apples with $A$ and $B$ is same as that with $E$ and $F$.
91. What is the number of apples with $D$ ?
(A) 3
(B) 4
(C) 5
(D) 6
92. What is the number of apples with $E$ ?
(A) 2
(B) 3
(C) 4
(D) 5
93. What is the difference in the number of apples with $B$ and that with $F$ ?
(A) 6
(B) 7
(C) 8
(D) Can not be determined
94. What is the number of apples with A?
(A) 10
(B) 11
(C) 12
(D) Can not be determined
95. What is the total number of apples with A and that with F ?
(A) 13
(B) 12
(C) 11
(D) 14

Directions: (Q. $96-100)$ In each of the following questions, a series is given with one term missing choose the correct alternative that will continue the same pattern and replace the question mark in the given series:
96. $4,48,180,448,900,---$
(A) 1584
(B) 1684
(C) 1484
(D) 1784
97. 97, 79, 67, 53, ---
(A) 43
(B) 37
(C) 47
(D) 41
98. $3,35,99,195,---, 483$
(A) 232
(B) 323
(C) 203
(D) 313
99. $1,1,1.5,3,7.5,---$
(A) 20.5
(B) 21.5
(C) 22.5
(D) 23.5
100. BAD, DBE, HEC, NJF, --- , FZG
(A) VQB
(B) VQC
(C) UQB
(D) UQC

