

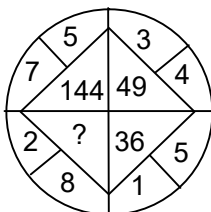
I (HARYANA STATE)
SET – A
(2020 – 21)
(For Class – X)
MENTAL ABILITY TEST (MAT)
QUESTION PAPER

Directions : (Q 1 to 5) What number will come at the place of question mark?

1. 4, -8, 16, -32, 64, ?
 (1) 128 (2) -128
 (3) -64 (4) -192
2. $\frac{1}{81}, \frac{1}{54}, \frac{1}{36}, \frac{1}{24}, (?)$
 (1) $\frac{1}{32}$ (2) $\frac{1}{9}$
 (3) $\frac{1}{16}$ (D) $\frac{1}{18}$
3. 2, 6, 3, 4, 20, 5, 6, (?), 7
 (1) 25 (2) 28
 (3) 30 (4) 42
4. 10, 5, 13, 10, 16, 20, 19, (?)
 (1) 22 (2) 23
 (3) 38 (4) 40
5. 30, 2, 20, 6, 12, 12, ?
 (1) 6 (2) 8
 (3) 10 (4) 15

Directions : (Q. 6 to 8) Which number will replace the question mark?

6.



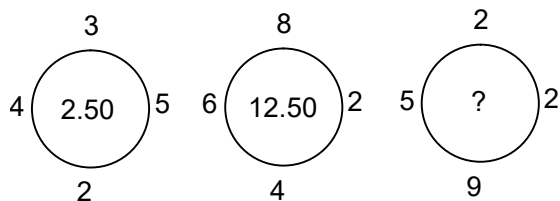
- (1) 81 (2) 68
 (3) 100 (4) 121

7.

5	8	7
11	17	15
21	33	?

- (1) 29 (2) 31
 (3) 28 (4) 33

8.



- (1) 1.61
(3) 12.25

- (2) 10.50
(4) None

9.

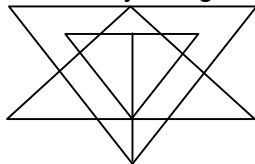


- (1) 3
(3) 1

- (2) 2
(4) 6

10.

How many triangles are in the given figure?

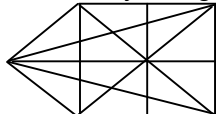


- (1) 18
(3) 27

- (2) 17
(4) 25

11.

How many straight lines are in given figure?

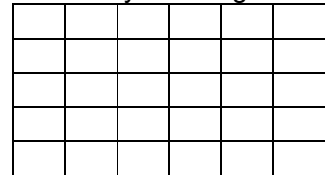


- (1) 10
(3) 12

- (2) 11
(4) 13

12.

How many Rectangles are in given figure?



- (1) 315
(3) 245

- (2) 70
(4) None

Directions : (Q. 13 to 15) P, Q, R, S, T and U are sitting along the circle facing the center

(a) P is immediate neighbour of Q who is second to the right of R.

(b) S is second to the left of T.

(c) U is immediate neighbour of T.

13.

Which of the following is correct?

- (1) S is between U and R
(3) P is between Q and R

- (2) Q is between P and T
(4) T is between U and Q

14. What is the position of U?
 (1) Second to the right of R (2) Between T and P
 (3) To the immediate left of S (4) Second to the right of Q
15. Which of the following is wrong?
 (1) P is to the immediate left of R. (2) Q is to the immediate right of P.
 (3) S is to the immediate right of Q. (4) T is to the immediate of U.

Directions : (Q. 16 & 17)

- (a) 'P × Q' means 'P is brother of Q'
 (b) 'P ÷ Q' means 'P is sister of Q'
 (c) 'P + Q' means 'P is father of Q'
 (d) 'P – Q' means 'P is mother of Q'

16. Which of the following means 'S is nephew of R'?
 (1) $S \times T \div J + R$ (2) $R \div M - S + T$
 (3) $R - M \div S \times T$ (4) $R + M - S \div T$
17. Which of the following means M is grandfather of W?
 (1) $M - J \div W$ (2) $M + J \times W$
 (3) $M \times T + W$ (4) $M + J - W$
18. If 283 is written as 328, 347 and 734 and so on, then which of the following two numbers will have least difference between them?
 (1) 827 and 347 (2) 347 and 518
 (3) 748 and 518 (4) 518 and 829

Direction : (Q 19 to 21) These questions are based on the following arrangement of symbols, letters and numbers.

\$ L 2 = ? P C 7 % E H @ ÷ 8 K B M 5 T V 3 *

19. How many such symbols are there in the arrangement, each of which is immediately preceded by a letter?
 (1) 1 (2) 2
 (3) 3 (4) 4
20. If all the numbers are deleted from the arrangement, which element will be the 7th to the left of the 14th element from the left end?
 (1) % (2) H
 (3) @ (4) C
21. '2 = P' is related to '7 % H' in the arrangement in the same way as '.....' is related to 'M5V'.
 (1) ÷ 8 S (2) ÷ @ K
 (3) @ ÷ K (4) @ ÷ 8
22. Odd one out:
 (1) FASTER (2) BIGGER
 (3) GREATER (4) LARGER
23. Choose most similar word in meaning in the words following:
 ROSE
 (1) Awake (2) Erected
 (3) Upright (4) Stood

24. Ram went 15 km. North of his house. After this, he turned West and walked a distance of 10 Km., after which he turned and walked a distance of 5 Km. South and finally he turned East and walked 10 Km. Now in which direction is he from his house?
 (1) EAST (2) WEST
 (3) NORTH (4) SOUTH
25. Looking at a picture, Radha reveals that his mother's only daughter is my mother. How is Radha related to that person?
 (1) Nephew (2) Sister
 (3) Wife (4) Niece
26. If '–' means '×', '×' means '+', '+' means '÷' and '÷' means '–', then $40 \times 12 + 3 - 6 \div 60 = ?$
 (1) 7.95 (2) 16
 (3) 4 (4) 479.95
27. 'ASTOUNDER' word can be divided into how many independent words without changing the order of letters and using each letter only once?
 (1) 0 (2) 1
 (3) 2 (4) 3
28. If the day before Yesterday was Thursday, then when would it be Sunday?
 (1) Today (2) 2 days after Today
 (3) Tomorrow (4) Yesterday

Direction : (Q 29 & 30) Put the given words in the sequence as in the dictionary and then select the correct sequence.

29. (A) Palisade
 (B) Protect
 (C) Pursuit
 (D) Profession
 (E) Process
 (1) A, B, D, E, C (2) A, D, B, E C
 (3) A, E, B, D, C (4) A, E, D, B C
30. (A) Credential
 (B) Compensate
 (C) Credible
 (D) Cremate
 (E) Collapse
 (1) B, E, A, C, D (2) E, B, C, A, D
 (3) E, B, A, C, D (4) B, E, C, A, D
31. Museum is related to Curator in the same way as prison is related to
 (1) Manger (2) Monitor
 (3) Jailor (4) Warden
32. Choose a meaningful word with given numbers.
 1 A 2 B
 3 L 4 R
 5 O 6 U
 (1) 5, 6, 3, 1, 2, 4 (2) 3, 1, 2, 5, 6, 4
 (3) 5, 6, 4, 2, 3, 1 (4) 4, 5, 6, 3, 2, 1
33. If $43 = 158$, $35 = 824$, $42 = 153$, then $32 = ?$
 (1) 84 (2) 83
 (3) 85 (4) 94

34. If $(14)^3$ is added to the square of a number, the answer so obtained is 4425. What is the number?
 (1) 1849 (2) 43
 (3) 41 (D) 1681
35. The ratio of the present ages of Ajay and Vijay is 7 : 6 and the product of their ages is 672 years. How old was Vijay years ago?
 (1) 20 Years (2) 18 years
 (3) 15 years (4) 25 years

Direction: (Q. 36 to 40) K, L, M, N, P, Q, R, S, U and W are the only 10 members in a department. There is a proposal to form a team within the members of the department, subject to the following conditions.

- (a) A team must include exactly one among P, R and S
 (b) If a team include either M or Q but not both
 (c) If a team includes one among S, U and W, then it must also include the other two
 (d) If a team includes K, then it must also include L and vice versa
 (e) L and N cannot be member of the same team
 (f) L and U cannot be members of the same team

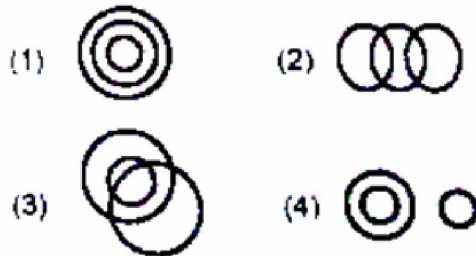
36. What would be the size of the largest possible team?
 (1) 8 (2) 7
 (3) 6 (4) 5
37. What would be the size of a team that includes K?
 (1) 2 and 3 (2) 2 and 4
 (3) only 2 (4) only 4
38. In how many ways a team can be constituted so that team includes N?
 (1) 6 (2) 5
 (3) 4 (4) 3
39. Who can not be a member of a team of size 3?
 (1) L (2) M
 (3) N (4) P
40. Who can be a member of a team of size 5?
 (1) K (2) L
 (3) M (4) P

Direction: (Q. 41 to 45) in each question, the main statement is followed by four sentences. Select the pair of sentences that relate logically to the given statement.

41. Either Gita is sick or she is careless
 A. Gita is not sick B. Gita is not careless
 C. Gita is sick D. Gita is careless
 (1) AB (2) AD
 (3) BA (4) DA
42. Raman gets a swollen nose-whenver he eats hamburgers.
 (A) Raman gets a swollen nose (B) Raman does not eat hamburgers
 (C) Raman does not get a swollen nose (D) Raman eats hamburgers
 (1) AB (2) DC
 (3) AC (4) None

43. Either the employers have no confidence in the management or they are hostile by nature.
 (A) They are hostile by nature
 (B) They are not hostile by nature
 (C) They have confidence in the management
 (D) They have no confidence in the management
 (1) BA (2) CB
 (3) DA (4) BD
44. When ever Raman reads late into the nights, his father beats him.
 (A) Raman's father does not beat him (B) Raman reads late into the night
 (C) Raman reads early in the morning (D) Raman's father beats him in the morning
 (1) CD (2) BD
 (3) AB (4) None of these
45. All irresponsible parents shout if their children do not read
 (A) All irresponsible parents do not shout
 (B) Children read
 (C) Children do not read
 (D) All irresponsible parents shout
 (1) AB (2) BA
 (3) CA (4) All of these



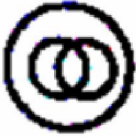

Direction: (Q.46 to 49) Choose exact venn diagram for given conditions in the questions.



46. A: Apples are not sweets
 B: All sweets are tasty
 C: No apple is tasty
47. A: Some popular people are handsome
 B: All actors are handsome
 C: Some actors are popular
48. A: All bad things are men
 B: All men are sad
 C: Some sad things are bad
49. A: Oranges are not sweet
 B: Some sweets are apples
 C: Some oranges are apples
50. Find the time between 9 : 00 and 10:00 when the clock needles coincide:
 (1) $9:10\frac{9}{11}$ (2) $9:47\frac{10}{11}$
 (3) $9:46\frac{4}{11}$ (4) $9:49\frac{1}{11}$

Direction: (Q. 51 & 52) Study the following information carefully and answer the questions given below:

The sum of the income of A and B is greater than the income of both C and D. The sum of the income of A and C is equal to the income of both B and D. A, earns half of the sum of B's and D's income.

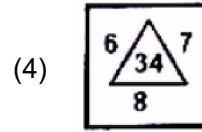
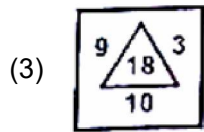
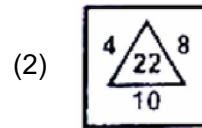
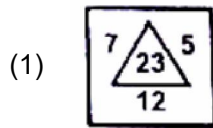
51. Which of the following statement is false?
 (1) A's income is more than B's (2) B's income is more than D's
 (3) C's income is more than D's (4) All are right
52. Who has the highest income?
 (1) A (2) B
 (3) C (4) D
53. Find the time between 9 : 00 and 10:00 when the clock needles are in opposite direction
 (1) $9:10\frac{9}{11}$ (2) $9:16\frac{4}{11}$
 (3) $9:11\frac{10}{11}$ (4) None
54. Which is the Venn diagram showing the correct relationship between Doctor, Lawyer and Professionals?
 (1)  (2) 
 (3)  (4) 
55. What day was on 8 March 2011?
 (1) Monday (2) Tuesday
 (3) Wednesday (4) None

Direction: (Q. 56 to 58) In each question (1), (2), (3) and (4) figures are given, out of which 3 figures are similar in a way, yet one figure does not match the other three. Select the incompatible figures for the other three

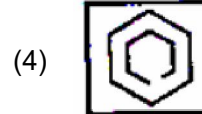
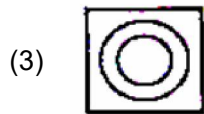
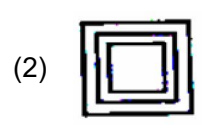
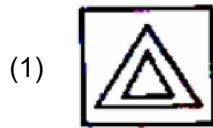
56.



57.

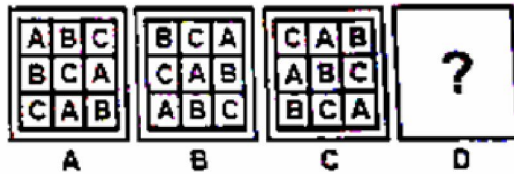


58.

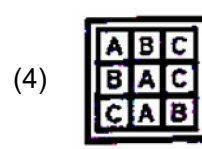
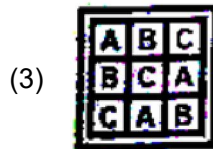
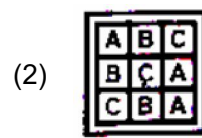
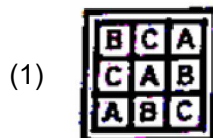


Direction:(Q.59 to 61) In each of the following questions, 3 question figures are given as A, B, C and 4 answer figures are given as 1, 2, 3 and 4. Select the figure from the answer figures that will continue the series given in the question figures.

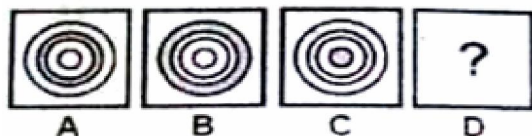
59. Question figures



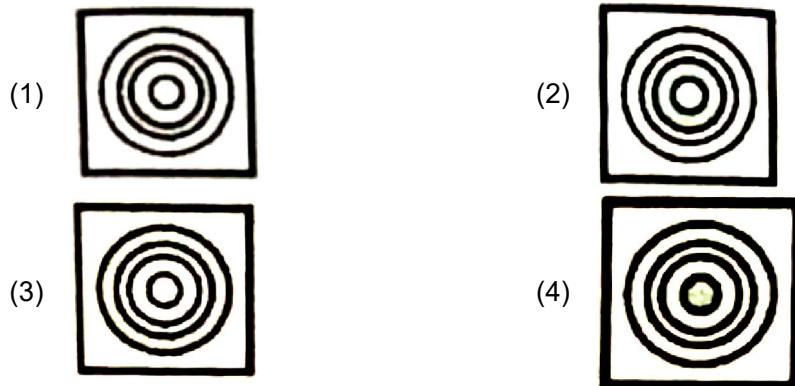
Answer Figures



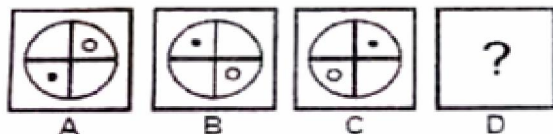
60. Question figures



Answer figures



61. Question figures



Answer figures



62. Opposite of 'AWKWARDNESS':

- (1) Artistic
- (3) Experience

- (2) Clever
- (4) Straight

63. Synonym of 'COMPETITOR'

- (1) Actor
- (3) Match

- (2) Rival
- (4) Player

64. If coding for 'EXAMINATIONS' is 2 3 4 5 6 3 7 5 8 6 9 then coding for 'NOMINATION':

- (1) 6 8 5 4 6 3 7 5 8 6
- (3) 8 6 4 5 6 3 7 5 8 6

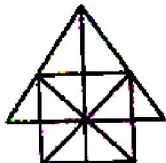
- (2) 6 8 4 5 6 3 7 5 8 6
- (4) 6 8 4 5 6 3 5 7 8 6

Direction: (Q. 65 to 69) Odd one out

65. (1) BD Kg
(3) Pr Su

(2) Km Np
(4) Tw Xz

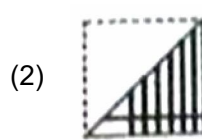
66. (1) $9 - 3$ (2) $\frac{1}{2} - \frac{1}{8}$
 (3) $\frac{1}{3} - \frac{1}{12}$ (4) $24 - 6$
67. (1) Moscow (2) New Delhi
 (3) Beijing (4) New York
68. (1) Army : General (2) Team : Captain
 (3) Creche : Child (4) Meeting : Chairman
69. Count the number of triangles and squares in the figure given below



- (1) 26 Triangles, 5 squares (2) 26 Triangles, 6 squares
 (3) 27 Triangles, 6 squares (4) 28 Triangles, 5 squares
70. In the following question, a square transparent paper is given along with a pattern four option figures are given below, which show the shape formed after the paper is folded on the dot line select the one that completes the pattern answer figure.
 Question figures



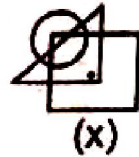
Answer figures



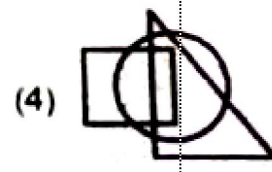
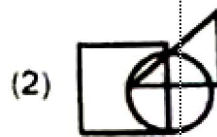
71. If Suresh reached some place on Tuesday, he said that he has come 3 days before then on what day the man reached who was late by 4 days?
 (1) Monday (2) Tuesday
 (3) Wednesday (4) Thursday

72. In the following question, figure (X) is given in which a point is established. Four other answer figures (1), (2), (3) and (4) are give after this figure. Only one of these answer figures is such that it is possible to establish the point according to the conditions give in figure X. Find the correct answer figure.

Question figure



Answer figure



73. If the words 'INTIMATION', INFORMATION, INTEREST, INTERROGATION, INSTIGATION' are kept in order according to the dictionary, which will be the 4th letter from the left side in the last word?

(1) R
(3) T

(2) O
(4) I

74. Age of D is middle among five friends, K is the youngest. U is greater than N and N is smaller than A and D. Who is the biggest among them?

(1) A
(3) N

(2) U
(4) Things given are insufficient

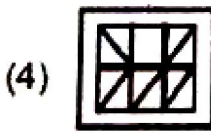
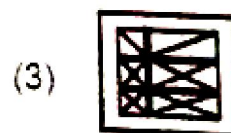
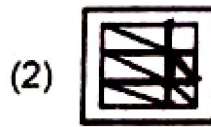
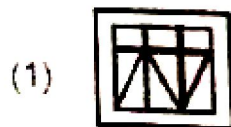
75. Four complex shapes followed by an X are given such that the shape X is embedded in one of the four. Choose the correct option

Question Figure



Answer figures

Answer figure



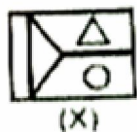
Direction: (Q. 76 & 77) In each of the following questions two statements A and B are given, based on their conclusions. 4 statements are given. Candidates have to guess the correct conclusions, considering both the statement to be true even if they seem to be false.

76. Statement: (A) Ajay is an artist
(B) Artists are Handsome
Conclusion: (1) All handsome people are artists
(2) Ajay is handsome
(3) Ajay is not handsome
(4) Handsome people are not artists
77. Statement: (A) All knowledge is good
(B) All knowledge is difficult
Conclusion: (1) Some good things are hard
(2) All difficult things are difficult
(3) All good things are hard
(4) Simple things are not knowledge
78. If the English alphabet is written in reverse order, which will be the third letter to the right of the 15th letter from the left?
(1) I (2) H
(3) G (4) J
79. The managing director of a firm arrived at the conference Hall 10 minutes before 12: 30 to interview and it was 20 minutes before the chairman. If the chairman arrived half an Hour late than the scheduled time for interview, than what was the scheduled time for the interview.
(1) 11 : 55 (2) 12 : 05
(3) 12 : 15 (4) 12 : 10
80. How many such 4 are there in the following number series, where 3 is immediately before and 2 is immediately after
45362434293410342743234234
(1) 2 (2) 3
(3) 4 (4) 5

Direction: (Q. 81 to 83) Choose water image of given figure/word(X)

81. NDL2CA430Y
(X)
- (1)  (2) 
(3)  (4) 

82.



83. bchixpv

(X)

(1) Pchixbv

(3) Pciixbv

(2) Pciixp^

(4) Pciixb^

Direction: (Q. 84 to 86) Choose Mirror image of given figure/words(x)

84. STLAQUE

(X)

(1) **STLAQUE**

(2) **STLAQUE**

(3) **STLAQUE**

(4) **STLAQUE**

85. bdpcox19

(X)

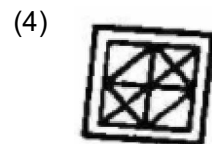
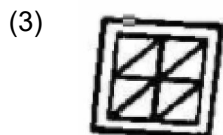
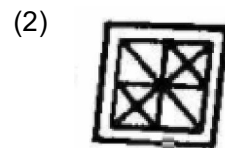
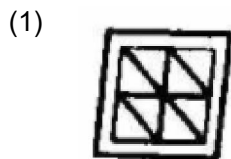
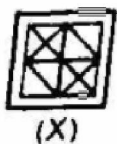
(1) **bdpcox19**

(2) **gixocpdx**

(3) **bdpcox19**

(4) **gixocpdx**

86.



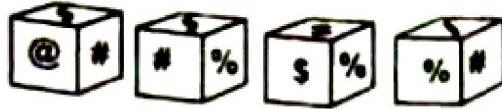
87.



Which number is opposite to 4?

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

88. What is the opposite to \$



- (1) 1 (2) #
(3) @ (4) %

Direction: (Q. 89 to 91) In a given cube:

- (a) Red colour is opposite to Black
(b) Green is between Red & black
(c) Brown and Blue near to each other
(d) Blue & White near to each other

Give answer on the bases of given information:

89. Which 4 colour are near to each other?

- (1) Black, Blue, Brown, Red (2) Green, Brown, Red, White
(3) Blue, Brown, Red, White (4) Black, Blue, Red, White

90. Which colour is opposite to white?

- (1) Brown (2) Red
(3) Green (4) Blue

91. Conclusion of (a) and (e) Point:

- (1) Blue colour on Top (2) Black colour on Top
(3) Green colour on Top (4) White colour on Top

Direction: (Q. 92 to 94) Each side of solid cube is 12 cm. The opposite face of this cube are painted Red, Blue and Black. After this, the cube is cut into small cubes whose each side is 2 cm. Answer the following questions on this basis:

92. What will be the number of cubes with colourless faces?

- (1) 8 (2) 27
(3) 36 (4) 64

93. What will be the number of cubes with three faces painted in three different colours?

- (1) 0 (2) 4
(3) 8 (4) None of these

94. How many cubes will have one of its face Red and other faces colourless?

- (1) 18 (2) 24
(3) 32 (4) 36

95. Select a proper group of letters form the given alternations

c _ bbb _ _ abbbb _ abbb _

- (1) aabcb (2) abccb
(3) abacb (4) bacbb

96. In a certain code language GARNISH is written as RGAINHS. What will GENIOUS be written in that code language?
(1) NEGUISU (2) NGEOISU
(3) NGESUOI (4) NEGSUOI
97. In a certain code language INKER is written as GLLGT and GLIDE is written as EJJFG, What will JINKS be written in that code language?
(1) GFOMU (2) HGMMU
(3) HGOGH (4) HGOMU
98. If U is denoted by 7, M by 2, I by 5, O by 1, K by 8 and J by 4, then what will be the numeric form of the word MOUJIK, when written in the reverse order?
(1) 217458 (2) 845712
(3) 854712 (4) 857412

Direction:(Q.99 & 100) Choose wrong number in the given series

99. 10, 26, 74, 218, 654, 1946, 5834
(1) 26 (2) 74
(3) 218 (4) 654
100. 325, 259, 202, 160, 127, 105, 94
(1) 94 (2) 127
(3) 105 (4) 202

(For Class – X)
MENTAL ABILITY TEST (MAT)

ANSWER KEYS

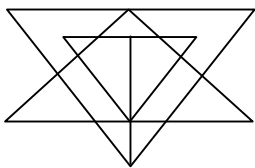
1.	2	2.	3	3.	4	4.	4
5.	1	6.	3	7.	1	8.	1
9.	2	10.	2	11.	3	12.	1
13.	3	14.	4	15.	1	16.	2
17.	4	18.	3	19.	1	20.	1
21.	3	22.	1	23.	4	24.	3
25.	4	26.	3	27.	4	28.	3
29.	4	30.	3	31.	3	32.	2
33.	2	34.	3	35.	1	36.	4
37.	4	38.	1	39.	1	40.	3
41.	2	42.	4	43.	4	44.	4
45.	1	46.	4	47.	3	48.	1
49.	2	50.	4	51.	1 & 4 both	52.	2
53.	2	54.	1	55.	2	56.	2
57.	3	58.	4	59.	3	60.	2
61.	2	62.	2	63.	2	64.	2
65.	4	66.	1	67.	4	68.	3
69.	1	70.	1	71.	2	72.	1
73.	4	74.	4	75.	Bonus	76.	2
77.	2	78.	1	79.	4	80.	2
81.	1	82.	2	83.	4	84.	4
85.	3 & 4	86.	4	87.	3	88.	1
89.	Bonus	90.	1	91.	2	92.	4
93.	3	94.	3	95.	2	96.	2
97.	4	98.	3	99.	4	100.	4

(2020 – 21)
(For Class – X)
MENTAL ABILITY TEST (MAT)

SOLUTIONS

1. 2
1. $\times(-2)$ series
2. 3
2. Denominator decreases by factor $\frac{2}{3}$
3. 4
3. Middle term is product of two of its adjacent terms.
 $6 \times 7 = 42$
4. 4
4. 1st series $\rightarrow +3, +3, +3$
2nd series $\rightarrow \times 2, \times 2, \times 2$
 $20 \times 2 = 40$
5. 1
5. Dual series
1st series $\rightarrow -10, -8, -6$
2nd series $\rightarrow \times 3, \times 2, \times 1$
 $\Rightarrow 12 - 6 = 6$
6. 3
6. $(3 + 4)^2 = 49, (7 + 5)^2 = 144$
 $(5 + 1)^2 = 36$
 $\Rightarrow (8 + 2)^2 = 100$
7. 1
7. $21 - 11 = 10/2 = 5$
 $33 - 17 = 16/2 = 8$
 $29 - 15 = 14/2 = 7$
8. 1
8. $(4^2 + 3^2) / (2 + 5) = 2.50$
 $(6^2 + 8^2) / (4 + 2) = 12.50$
Similarly,
 $(5^2 + 2^2) / (9 + 2) = 1.61$
9. 2
9. Both middle boxes are opposite faces for $5 \leftrightarrow 2$
10. 2

10.

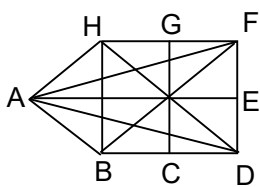


1 fig \rightarrow 7
 2 fig \rightarrow 7
 4 fig \rightarrow 1
 7 fig \rightarrow 1
 11 fig \rightarrow 1
Total = 17

11.

3

11.

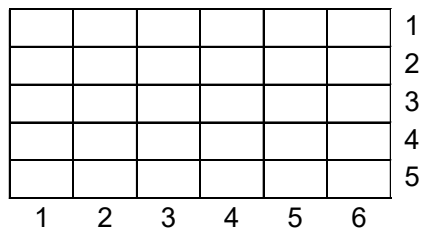


AH, AB, HF, BD, HB, FD, HD, BF, GC, AE, AF, AD
 Total = 12

12.

1

12.

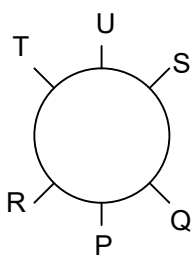


$$(1 + 2 + 3 + 4 + 5 + 6) \times ((1 + 2 + 3 + 4) \\ = 21 \times 15 = 315$$

13.

3

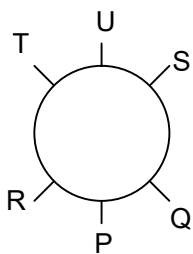
13.



14.

4

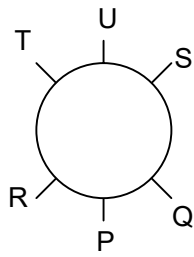
14.



15.

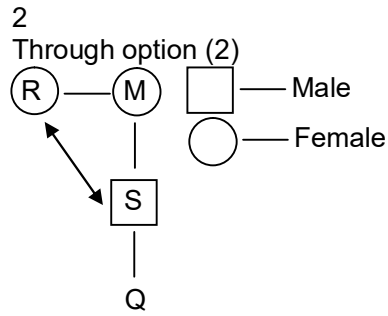
1

15.



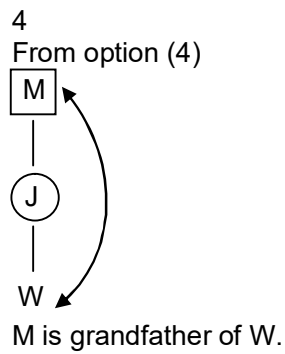
16.

16.



17.

17.



18.

18.

3
From Option (3)
748 and 518 written as
 $874 - 851 = 23$ (minimum)

19.

19.

1
 $S L 2 = ? P C 7 \% E \underline{H} @ \div 8 K B M 5 T V 3$
Only 1

20.

20.

1
 $S L = ? P C \underline{\%} E H @ \div K B M T V 3 *$
 $14 - 7 = 7^{\text{th}}$ from left is %

21.

21.

3
 $S \underline{L} \underline{2} = ? \underline{P} \underline{C} \underline{7} \% \underline{E} \underline{H} @ \div \underline{K} \underline{B} \underline{M} \underline{5} \underline{T} \underline{V} 3 *$

22.

22.

1
Father is related to speed, all others are related to size.

23.

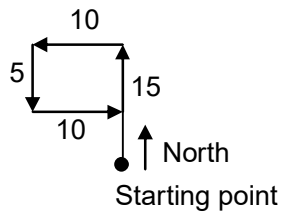
23.

4
The nearest meaning of ROSE is STOOD.

24.

3

24.



25.

4

25.

His mother's only daughter is his sister who is mother of Radha.
So, Radha is niece of the man.

26.

3

26.

$$40 + 12 \div 3 \times 6 - 60$$

$$40 + 24 - 60$$

$$64 - 60 = 4$$

27.

4

27.

(4) → 3 words

As, to, under

28.

3

28.

Day before yesterday → Thursday

Today → Saturday

Tomorrow → Sunday

29.

4

29.

(A) Palisade

(E) Process

(D) Profession

(B) Protect

(C) Pursuit

30.

3

30.

(E) Collapse

(B) Compensate

(A) Credential

(C) Credible

(D) Cremate

31.

3

31.

Curator is incharge of museum.

Jailor is incharge of prison.

32.

2

32.

L A B O U R

3 1 2 5 6 4

33.

2

33.

$$\begin{array}{c} 3^2 = 1 \\ \downarrow \quad \downarrow \\ 43 = \underline{15} \underline{8} \\ \uparrow \quad \uparrow \\ 4^2 = 1 \end{array}$$

Similarly,

$$\begin{array}{c} 2^2 = 1 \\ \downarrow \quad \downarrow \\ 32 = \underline{8} \underline{3} \\ \uparrow \quad \uparrow \\ 3^2 = 1 \end{array}$$

34.

$$14^3 + (x)^2 = 4425$$

34.

$$x^2 = 4425 - 2744$$

$$x = \sqrt{1681}$$

$$x = 41$$

35.

1

35.

Let present age be $7x$ and $6x$

$$7x \times 6x = 672$$

$$x^2 = \frac{672}{42} = 16$$

$$x = 4$$

$$\text{Vijay age} = 6x = 24$$

$$4 \text{ years ago} = 20$$

36.

4

36.

From statement (a) and (b)

Two members are to be selected,

Of the remaining seven

To maximize the size of the team we would choose S

U and W are included in the team(statement (c)).

We cannot include K or L because we would then have to leave out N and U(from statement (e) and (f))

37.

4

37.

If 'K' is included 'L' has to be included (statement(d)).

If 'L' is choose neither N nor U can be chosen(statement(e & f)).

S, W are also not included because S, U, W have to be always together(statement(c)).

Hence, one of P or R would be selected (statement(a))

And one of M or Q would be selected (statement(b)).

38.

1

38.

If a team includes N, it cannot include 'L' and therefore not even 'K' (statement (e) and (d)).

According to the statement (a), one of P or R or S has to be included.

According to the statement(b) one of M or Q has to be selected.

So following cases are possible:

PQN, RQN, PMN, RMN

If 'S' is selected

SUWMN, SUWQN

These are the only possible cases

Thus, in all $4 + 2 = 6$ ways

39.

1

39.

From the statement (a) and (b)

One of P, R, S and one of M, Q are to be selected.
 But from statement(d) K, L are always together.
 Thus, L cannot be included in a team of 3 members.

40. 3
 40. From statement(a) one of P, R, S has to be selected. To make a team of 5.
 S will be chosen(which leaves out P and R)
 If 'S' is chosen, 'U' has to be chosen (statement(c))
 If 'U' is chosen, 'L' has to be chosen (statement(c))
 K cannot be chosen(statement(d)) and from statement(b); one of M or Q has to be chosen

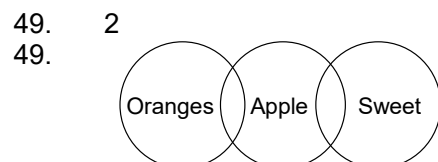
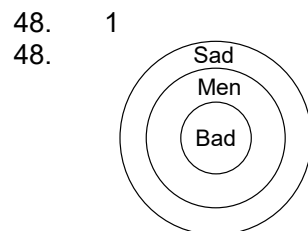
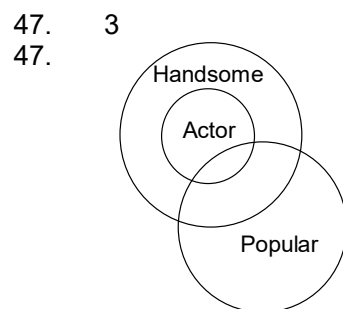
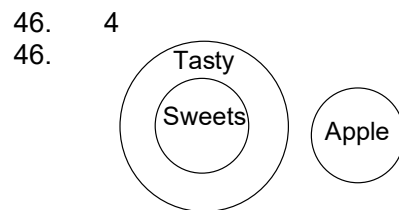
41. 2
 41. If Gita is not sick, means she is careless.

42. 4
 42. Raman does not eat hamburgers, means he does not get a swollen nose.

43. 4
 43. If they are not hostile by nature means they have no confidence in the management.

44. 4
 44. None of the given options relates logically to the given statements.

45. 1
 45. As all irresponsible parents do not shout, it follows that the children read.



50. 4
 50. To be together between 9 and 10 o'clock, the minute hand has to gain 45 min spaces
 55 min spaces gained in 60 min

$$45 \text{ min spaces are gained in } \left(\frac{60}{55} \times 45 \right) \text{ min} = 49 \frac{1}{11} \text{ min}$$

So answer is $9:49 \frac{1}{11}$

51. 1 & 4 both
 51. $A + B > C + D$ (i)
 $A + C = B + D$ (ii)

$$A = \frac{B+D}{2}, \text{ so from(ii) we get } C = \frac{B+D}{2} = A$$

Substituting A and C in (i) we get $B > D$

So, $B > C = A$ and $B > D$ and $B > A$

$B > A = C > D$. here A's income is less than B

If option (1) is false then option(4) must be false

52. 2
 52. $A + B > C + D$ (i)
 $A + C = B + D$ (ii)

$$A = \frac{B+D}{2}, \text{ so from(ii) we get } C = \frac{B+D}{2} = A$$

Substituting A and C in (i) we get $B > D$

So, $B > C = A$ and $B > D$ and $B > A$

$B > A = C > D$. B's income is the highest.

53. 2
 53. To be opposite between 9 to 10 o'clock, the min. hand has to gain 15 min. spaces
 55 min. spaces gained in 60 min

$$15 \text{ min spaces are gained in } \left(\frac{60}{55} \times 15 \right) \text{ min} = \frac{180}{11} = 16 \frac{4}{11} \text{ min}$$

So answer is $9:16 \frac{4}{11} \text{ min}$

54. 1
 54.



55. 2
 55. 8 March 2011
 Odd days in Century $\rightarrow 2000 \rightarrow 0$ odd days
 Odd days upto previous year $\rightarrow 10$ years + 2 leap year
 $= 12$ odd days or 5 odd days
 Odd days in Current year \rightarrow

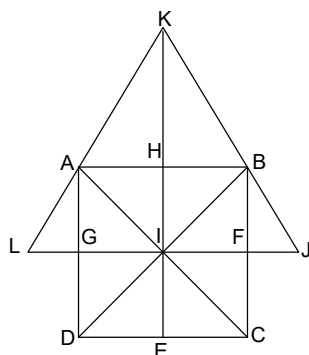
Jan - 3
Feb - 0
Mar - 1

 4 odd days
 Total odd days $\rightarrow 0 + 5 + 4 = \frac{9}{7} = 2$ odd days

Means 8 March 2011 → Tuesday

56. 2
56. As per observation
57. 3
57. As per observation
(1) $(7 \times 5) - 12 = 23$
(2) $(4 \times 8) - 10 = 22$
(3) $(9 \times 3) - 10 = \mathbf{[17]}$
(4) $(6 \times 7) - 8 = 34$
58. 4
58. As per observation
59. 3
59. As per observation
60. 2
60. As per observation
61. 2
61. As per observation
62. 2
62. As per observation
63. 2
63. Rival is the synonym of competitor
64. 2
64. EXAMINATIONS
1 2 3 4 5 6 3 7 5 8 6 9
So,
NOMINATION
6 8 4 5 6 3 7 5 8 6
65. 4
65. The difference between the positions of alphabet is two in all of the given options except 4.
66. 1
66. When we divide the first number with the second number we will get 4 as quotient except 3.
67. 4
67. Except New York all of them is the capital of different countries.
68. 3
68. As per observation.
69. 1

69.



Square – AGHI, HBIF, GIBF, IFEC, ABCD

Triangle – KAH, KHB, ALG, AIH, AGI, HIB, BIF, BFJ, GDI, IDE, IFC, KAB, AIK, BIK, AIB, ALI, BIJ, AID, BIC, DIC, KLI, KJI, ADC, DCB, KLJ

70. 1

70. As per observation.

71. 2

71. When Suresh reached on Tuesday he said he has come 3 day before means he has to come on Friday.

So, if the man reached on Tuesday he was late by 4 days.

72. 1

72. As per observation.

73. 4

73. If we arrange all the given words according to dictionary then INTIMATION will be last word and 4th letter of this word is I.

74. 4

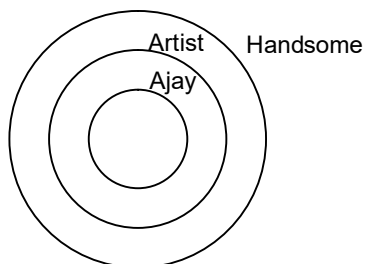
74. Relation between U and A is not given so we can't say anything.

75. Bonus

75. As per observation.

76. 2

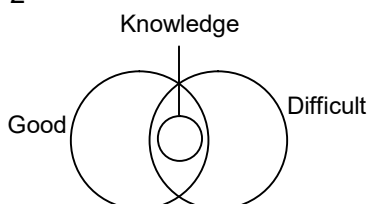
76.



So from the figure we can say Ajay is Handsome.

77. 2

77.



Although we don't consider meaning of English in syllogism but if we go for this then option I is also correct, where difficult means hard.

78. 1
 78. If English alphabet is written in reverse order I will be the 3rd to the right of the 15th letter from the left.

79. 4
 79. The managing director of a firm arrived 10 min before 12:30 to interview means 12:20. Which is 20 minutes before Chairman. It means Chairman come at 12:40 which is 30 min late according to scheduled time of interview so the interview was held at 12:10.

80. 2
 80. 4 5 3 6 2 4 3 4 2 9 3 4 1 0 3 4 2 7 4 3 2 3 4 2 3 4

81. 1
 81. As per observation.

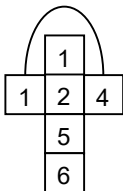
82. 2
 82. As per observation.

83. 4
 83. As per observation.

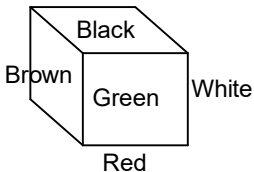
84. 4
 84. As per observation.

85. 3 & 4
 85. As per observation.

86. 4
 86. As per observation.

87. 3
 87. 
 As per net rule 1 is opposite to 4.

88. 1
 88. As per observation.

89. Bonus
 89. 

Cube is symmetrical figure so, out of 4, 2 will be always opposite to each other and rest will be adjacent to it.

90. 1
 90. White is opposite of brown.

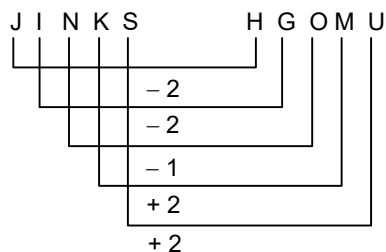
91. 2

91. As per observation.
92. 4
92. The number of cubes with 0 face painted is $(n - 2)^3 = 64$
93. 3
93. The three coloured smallest cubes will be at corners so there is 8 three coloured cubes.
94. 3
94. $2(n - 2)^2 = 32$
One faced red colour small cubes will be found on 2 faces of larger cubes.
95. 2
95. c a b b b b c a b b b b c a b b b b
96. 2

96. GARNISH → R GAINHS
1 2 3 4 5 6 7 3 1 2 5 4 7 6
GENIOUS → 3 1 2 5 4 7 6 → N G E O I S U

97. 4
97. I N K E R G L L G T
-
- 2
-2
+1
+2
+2

Similarly,



98. 3
98. U \rightarrow 7
M \rightarrow 2
1 \rightarrow 5
O \rightarrow 1
K \rightarrow 8
J \rightarrow 4
MOUJIK \rightarrow 217458
It is asking reverse
So \rightarrow 854712

99. 4
10 26 74 218 654 1946 5834
The difference is multiplied by 3 so it should be 650 instead of 654
100. 4

100. 325, 259, 202, 160, 127, 105, 94
The sequence is $-66 - 55 - 44 - 33 - 22 - 11$
So it should be 204 instead of 202