

TELANGANA NTSE – NOVEMBER 2019

MENTAL ABILITY TEST (MAT)

Medium : ENGLISH

Time : 120 Minutes

100 Marks

MENTAL ABILITY TEST : Session – I

Instructions to Candidates

Read the following instructions carefully before you answer the questions. Answers are to be SHADED on a SEPARATE OMR Answer sheet given, with a HB pencil. Read the **Instructions printed on the OMR sheet carefully before answering the questions.**

1. Please write your Centre Code. No and Roll No. very clearly (only one digit in one block) on the OMR sheet as given in your admission card. Please see that no block is left unfilled and even Zeros appearing in the Centre Code No. are correctly transferred to the appropriate blocks on the OMR sheets as shown in the example given in the OMR sheet. For all the subsequent purposes, your Centre Code No. and Roll No. Shall remain the same as given on the Admission Card.
2. All questions carry **one** mark each.
3. Since **all** questions are **compulsory**, do not try to read through the whole question paper before beginning to answer it.
4. Begin with the first question and keep trying one question after another till you finish all three parts
5. If you do not know the answer to any question, do not spend much time on it and pass on to the next one. If time permits, you can come back to the questions which you have left in the first instance and try them again
6. Since the time allotted to the question paper is very limited, you should make the best use of it by not spending too much time on any question.
7. The blank pages are provided for rough work at the end of each part.
8. REMEMBER, YOU HAVE TO SHADE ANSWERS ON A SEPARATE OMR SHEET PROVIDED.
9. Answer to each question is to be indicated by **SHADING** the circle having the number of the correct alternative in the **OMR** sheet from among the one given for the corresponding question in the booklet.
10. Now turn to the next page and start answering the questions.
11. After the examination, you should hand over the **OMR** sheet to the Invigilator of the room.
12. The candidate **need not return** this Question paper booklet and can take it after completion of the examination. No candidate should leave the examination hall before the end of the examination.

MENTAL ABILITY TEST (MAT)

(Q.Nos. 1 to 100)

Max. Marks : 100

Note : SHADE the correct alternatives in the **OMR** Answer Sheet provided, from amongst the ones given against the corresponding questions in the Question Booklet. For shading the circles, use a **HB pencil**

Directions: (Q: 1 to 5): In the number series given below, one number is missing. Each series is followed by 4 alternatives (1), (2), (3), (4). One of them is the right answer. Identify and indicate it as per the 'instructions'

1. 6, 28, 120, 496,
(1) 1035 (2) 2016 (3) 2019 (4) 1234
2. 1, 5, 15, 34, 65,
(1) 111 (2) 76 (3) 87 (4) 104
3. 1, 43, 161, 407,
(1) 745 (2) 614 (3) 829 (4) 725
4. 7, 31, 211, 2311,
(1) 12 (2) 18641 (3) 20141 (4) 30031
5. 5, 23, 72,
(1) 181 (2) 175 (3) 96 (4) 124

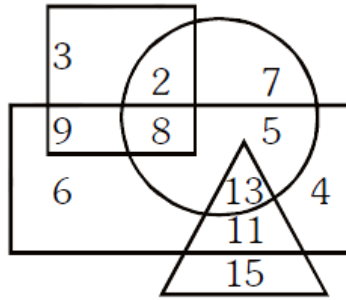
Directions: (Q: 6 to 10): In each of the following questions, a setter series is given in which some letters are missing. The missing letters are given in the proper sequence as one of the alternatives. Find the correct alternative.

6. ___ aba ___ ba _ ab
(1) abbbba (2) abbab (3) baabb (4) bbaba
7. ab ___ b _ bbaa _
(1) abaab (2) abbab (3) baaab (4) babba
8. _ baa _ aab _ a _ a
(1) aabb (2) aaba (3) abab (4) baab
9. ___ babbbaa _ a ___
(1) ababb (2) baaab (3) bbaba (4) babbb
10. ___ op ___ mo ___ n ___ pnmop _
(1) mnpmon (2) mpnmop (3) mnompn (4) mnpomn

Directions: (Q: 11 to 15): In the following alphabet series, a term is missing as shown by question mark (?). Choose the missing term from options.

11. eac, gce, ieg, ?
(1) jhi (2) jgi (3) kgi (4) khi
12. ejo, tyd, ins, xch, ?
(1) nrw (2) mrw (3) msx (4) nsx
13. 2Z5, 7Y7, 14X9, 23W11, 34V13, ?
(1) 27U24 (2) 47U15 (3) 45U15 (4) 47V14
14. 2A11, 4D13, 12G17, ?
(1) 36I19 (2) 48J21 (3) 36J21 (4) 48J23
15. C4X, F9U, 116R
(1) K25P (2) L25P (3) L25O (4) L27P

Directions: (Q: 16 to 20): Observe the diagram carefully and then answer the following questions. Here rectangle represents males, triangle represents the people who did PhD, circle represents Urban and square represents civil servants.



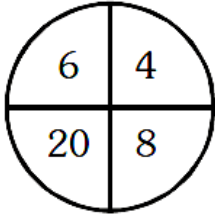
16. How many urban male civil servants are there?
 (1) 8 (2) 26 (3) 11 (4) 39
17. How many female PhD are there?
 (1) 39 (2) 11 (3) 15 (4) 26
18. How many urban male PhD civil servants are there?
 (1) 10 (2) 8 (3) 13 (4) none of these
19. How many urban female civil servants are there?
 (1) 3 (2) 2 (3) 7 (4) 15
20. How many urban male PhD are there?
 (1) 15 (2) 13 (3) 39 (4) none of these

Directions : (Q: 21 to 25): In each of the following questions, the two expressions on either side of sign (=) will have the same value. If two terms on either side or on the same side are interchanged, the correct terms to be interchanged have been given as one of the alternatives under the expressions. Find the correct alternative in each case.

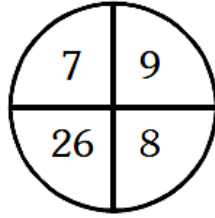
21. $5 + 3 \times 6 - 4 \div 2 = 4 \times 3 - 10 \div 2 + 7$
 (1) 4, 7 (2) 5, 7 (3) 6, 4 (4) 6, 10
22. $7 \times 2 - 3 + 8 \div 4 = 5 + 6 \times 2 - 24 \div 3$
 (1) 2, 6 (2) 6, 5 (3) 3, 24 (4) 7, 6
23. $15 + 3 \times 4 - 8 \div 2 = 8 \times 5 + 16 \div 2 - 1$
 (1) 3, 5 (2) 15, 5 (3) 15, 16 (4) 3, 1
24. $6 \times 3 + 8 \div 2 - 1 = 9 - 8 \div 4 + 5 \times 2$
 (1) 3, 4 (2) 3, 5 (3) 6, 9 (4) 9, 5
25. $8 \div 2 \times 2(-11) + 9 = 6 \times 2 - 5 + 4 \div 2$
 (1) 5, 9 (2) 8, 5 (3) 9, 6 (4) 11, 5

Directions: (Q: 26 to 30): In this type of questions, a figure or a matrix is given in which some numbers are filled according to a rule. A place is left blank with question mark. Find out which number will replace the questions mark (?) from given options.

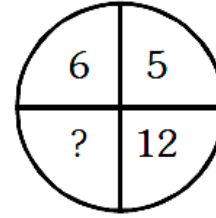
26.



(1) 23



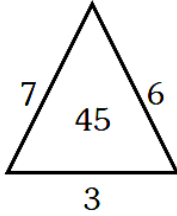
(2) 25



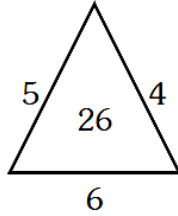
(4) 22

(3) 18

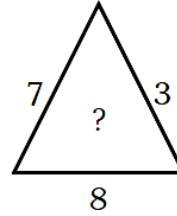
27.



(1) 29



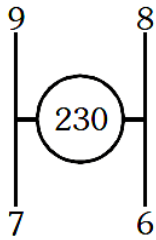
(2) 42



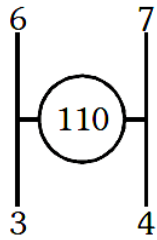
(4) 28

(3) 36

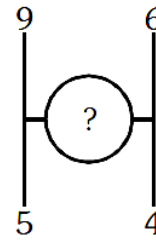
28.



(1) 186



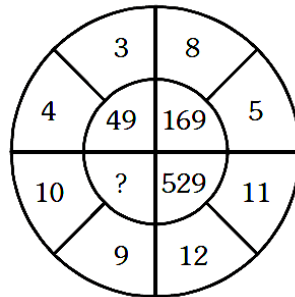
(2) 175



(4) 211

(3) 158

29.



(1) 441

(2) 324

(3) 462

(4) 361

30.

9	17	16
5	4	8
5	4	?
9	17	8

(1) 5

(2) 4

(3) 8

(4) 6

Directions: (Q: 31 to 35): Arrange the words given below in a meaningful sequence and chose correct answer from the 4 options.

31. (1) Key, (2) Door, (3) Lock, (4) Room, (5) Switch on.

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

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

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

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

32. (1) Word, (2) Paragraph, (3) Sentence, (4) Letters, (5) Phrase.

- (1) 4, 1, 5, 2, 3 (2) 4, 1, 3, 5, 2 (3) 4, 2, 5, 1, 3 (4) 4, 1, 5, 3, 2
33. (1) Police, (2) Punishment, (3) Crime, (4) Judge, (5) Judgement
(1) 3, 1, 2, 4, 5 (2) 3, 1, 2, 5, 4 (3) 3, 1, 4, 2, 5 (4) 3, 1, 4, 5, 2
34. (1) Family, (2) Community, (3) Member, (4) Locality, (5) Country
(1) 3, 1, 2, 4, 5 (2) 3, 1, 2, 5, 4 (3) 3, 1, 4, 2, 5 (4) 3, 1, 4, 5, 2
35. (1) Poverty, (2) Population, (3) Death, (4) Unemployment, (5) Disease
(1) 2, 3, 4, 5, 1 (2) 3, 4, 2, 5, 1 (3) 2, 4, 1, 5, 3 (4) 1, 2, 3, 4, 5

Directions: (Q: 36 to 40): Find out the relationship between the first two words and choose the word from the given alternative, which bears the same relationship to the third word, as the first two bear.

36. Funk : Vitamins :: Curie : ?
(1) Uranium (2) Radium (3) Radioactivity (4) Photography
37. Virology : Virus :: Semantics : ?
(1) Amoeba (2) Language (3) Nature (4) Society
38. Pituitary : Brain :: Thymus : ?
(1) Larynx (2) Spinal Cord (3) Throat (4) Chest
39. Vine : Grapes :: Poppy : ?
(1) Opium (2) Tobacco (3) Pears (4) Pineapple
40. Karnataka : Gold :: Madhya Pradesh : ?
(1) Diamond (2) Iron (3) Copper (4) Gems

Directions: (Q: 41 to 45): In these Questions, one word is coded according to a particular pattern and the candidate is asked to give the code letters for the another word following the same pattern.

41. In a certain code, LAWN is written as JCUP. How will SLIT be coded in that code?
(1) QNGV (2) QJGV (3) QNVG (4) NJGV
42. In a given code, SISTER is coded as 535301. UNCLE as 84670 and BOY as 129. How is RUSTIC written in the code?
(1) 633185 (2) 185336 (3) 363815 (4) 581363
43. In a certain code, LONG is written as 5123 and GEAR is written as 3748. How is LANE written in that code?
(1) 5427 (2) 5247 (3) 5847 (4) 5237
44. In a certain code READ is written as # 5%6 and PAID is written as \$%46. How is RIPE written in that code?
(1) #4\$5 (2) #6\$5 (3) \$4#5 (4) \$4#6
45. In a code CORNER is written as GSVRIV. How can CENTRAL be written in the code?
(1) DFOUSBM (2) GIRXVEP (3) GNFJKER (4) None of these

Directions: (Q: 46 to 49) : In each of the following Questions, four words are given. Which one of them will come in the third position, if all of them are arranged alphabetically as in a dictionary?

46. (1) Bishop (2) Bifocal (3) Bicycle (4) Bitter
(1) Bishop (2) Bicycle (3) Bifocal (4) Bitter
47. (1) Parasite (2) Party (3) Petal (4) paste
(1) Party (2) Paste (3) Parasite (4) Petal
48. (1) Research (2) Rational (3) Round (4) Rustic
(1) Rational (2) Research (3) Round (4) Rustic

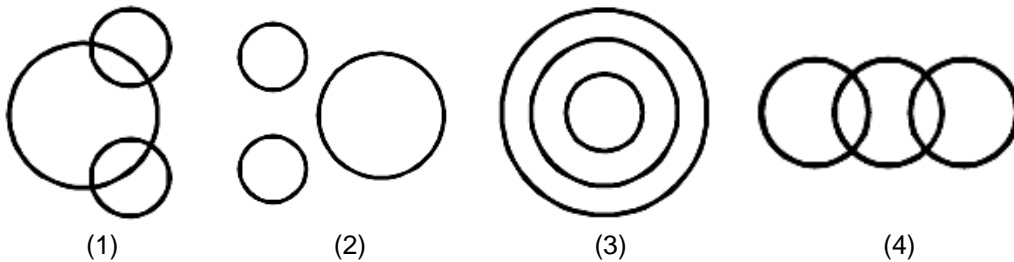
49. (1) Nature (2) Native (3) Narrate (4) Diastole
 (1) Native (2) Nature (3) Narrate (4) Diastole

Directions: (Q: 50 to 55): From the given five groups of letters, four of them are similar to each other in some manner, while one is different and this is to be chosen from the four alternative answers.

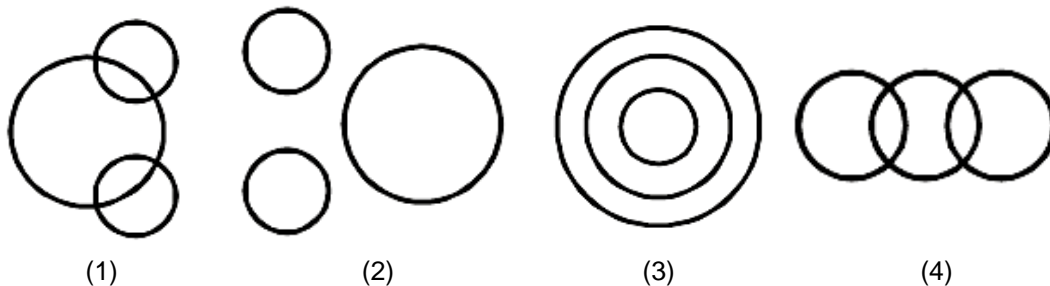
50. DE, PQ, TU, MO, FG
 (1) DE (2) PQ (3) TU (4) MO
51. XW, FG, ML, PO, TS
 (1) XW (2) FG (3) ML (4) PO
52. BD, MP, NQ, HK, TW
 (1) BD (2) MP (3) NQ (4) HK
53. AE, AI, IO, EI, OU
 (1) AE (2) AI (3) IO (4) EI
54. KP, MN, HR, GT, EV
 (1) KP (2) MN (3) HR (4) GT
55. Monday, Tuesday, Thursday, Saturday
 (1) Monday (2) Tuesday (3) Thursday (4) Saturday

Directions: (Q: 56 to 60):

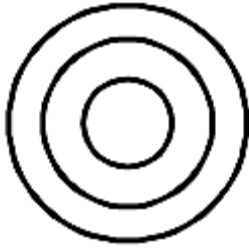
56. Which of the following diagrams indicates the best relation between Hockey, Football and Cricket?



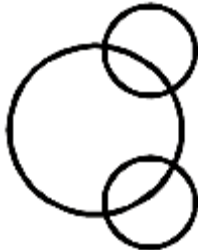
57. Which of the following diagrams indicates the best relation between Iron, Lead and Nitrogen?



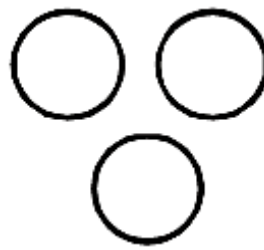
58. Which of the following diagrams indicates the best relation between Moon, Sun and Earth?



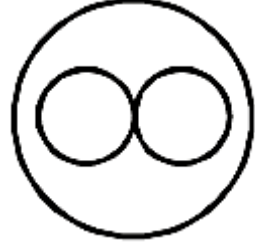
(1)



(2)

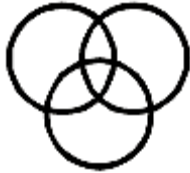


(3)

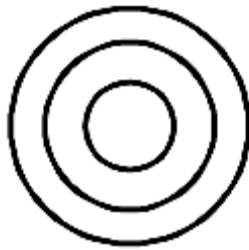


(4)

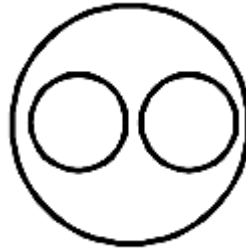
59. Which of the following diagrams indicates the best relationship between Hospital, Nurse and Patient?



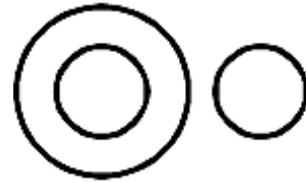
(1)



(2)

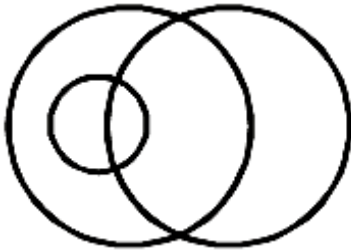


(3)

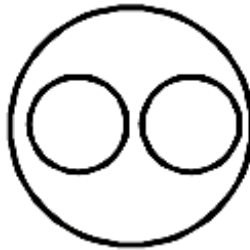


(4)

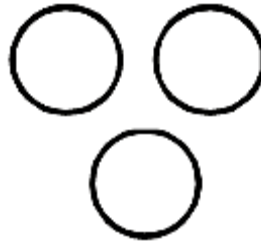
60. Which of the following diagrams indicates the best relationship between Mercury, Zinc and Metal?



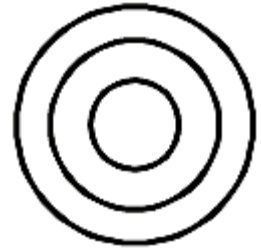
(1)



(2)



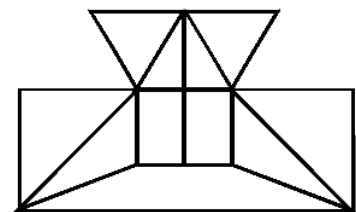
(3)



(4)

Directions: (Q: 61 to 65): These questions are based on analytical reasoning

61. Find the minimum number of straight lines required to make the given figure.



62. The number of triangles in the figure.

(1) 16

(2) 17

(3) 18

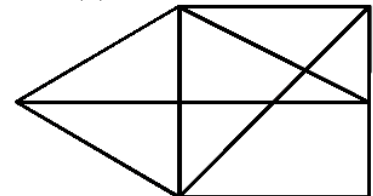
(4) 19

(1) 12

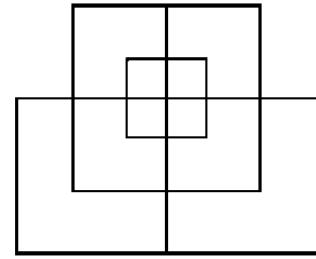
(2) 13

(3) 14

(4) 15

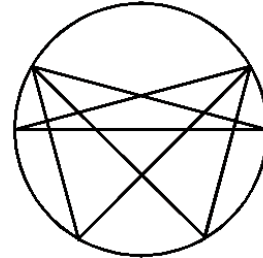


63. Find the number of straight lines required to make the given figure.



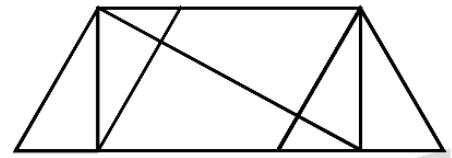
- (1) 13 (2) 15 (3) 17 (4) 19

64. The number of triangles in the given figure.



- (1) 22 (2) 24 (3) 26 (4) 28

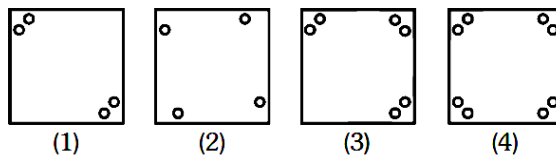
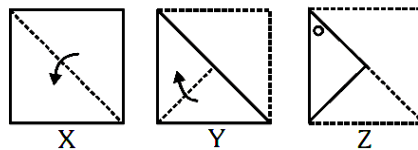
65. The number of triangles in the given figure.



- (1) 8 (2) 10 (3) 12 (4) 14

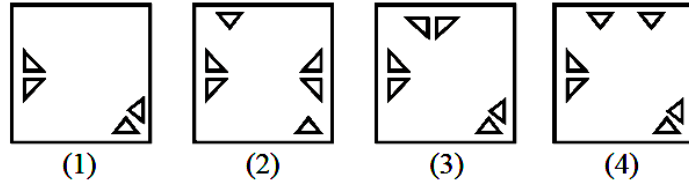
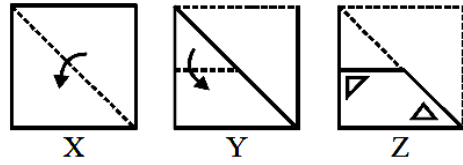
Directions: (Q: 66 to 70): Each of the following Questions consists of a set of three figures X, Y and Z showing a sequence of folding of piece of paper. Figure (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would mostly closely resemble the unfolded form of figure (Z)

66.



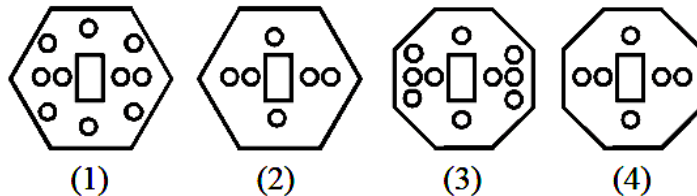
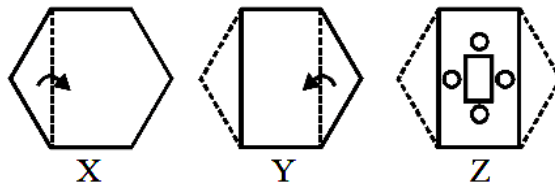
- (1) 1 (2) 2 (3) 3 (4) 4

67.



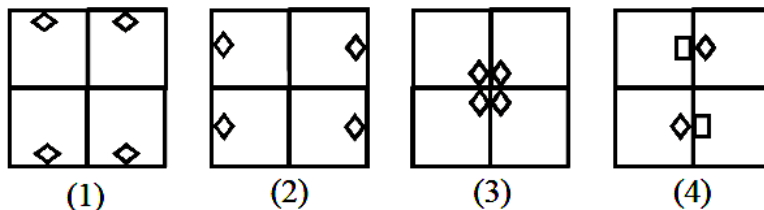
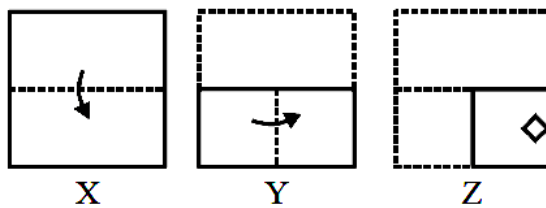
(1) 1 (2) 2 (3) 3 (4) 4

68.



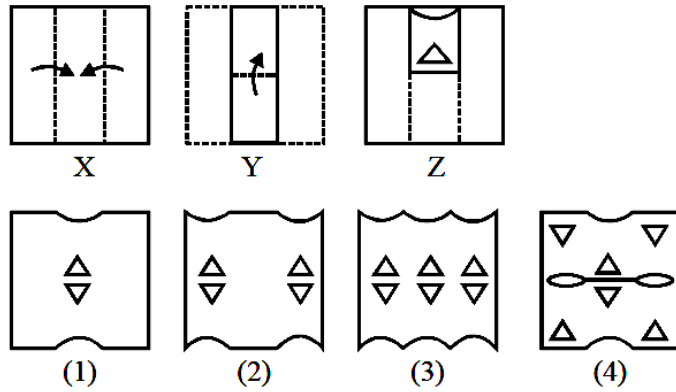
(1) 1 (2) 2 (3) 3 (4) 4

69.



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

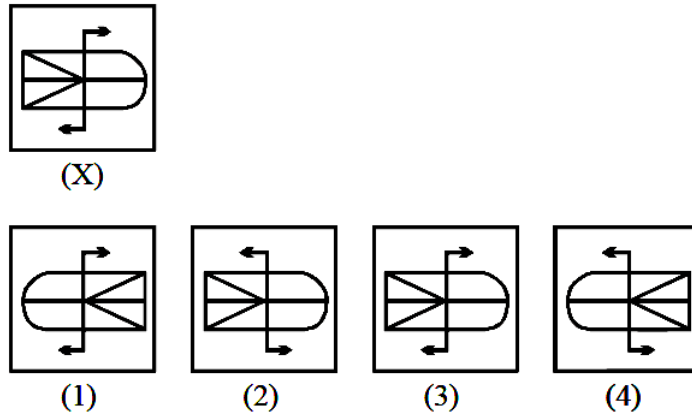
70.



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

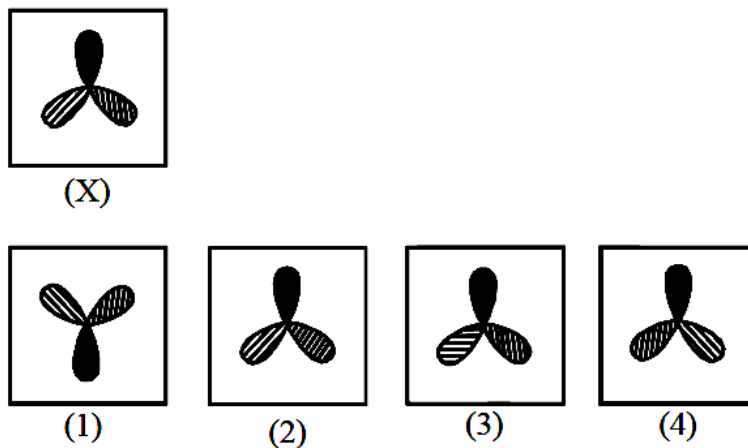
Directions: (Q: 71 to 75): In each of the following questions, choose the correct mirror images of the given fig. (X) from amongst the four alternatives (1), (2), (3), (4) given along with it. Mirror is placed right to each figure.

71.



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

72.



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

73.



(X)



(1)



(2)



(3)



(4)

74.

(1) 1

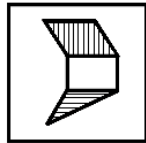
(2) 2

(3) 3

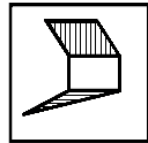
(4) 4



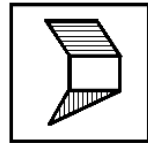
(X)



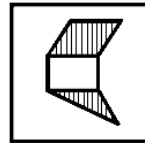
(1)



(2)



(3)



(4)

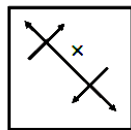
(1) 1

(2) 2

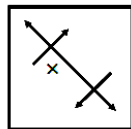
(3) 3

(4) 4

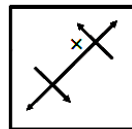
75.



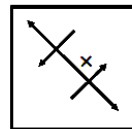
(X)



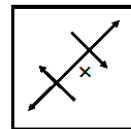
(1)



(2)



(3)



(4)

(1) 1

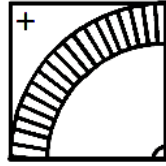
(2) 2

(3) 3

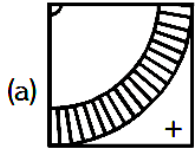
(4) 4

Directions (Q: 76 to 80): The reflection of an object as seen in water is called its water image. It is the inverted image. Find the water image of the figure (X) from the four alternative answers.

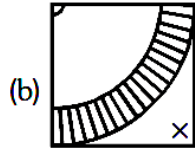
76.



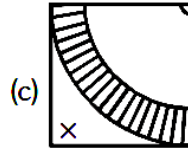
(X)



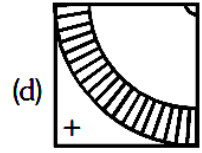
(1) (a)



(2) (b)

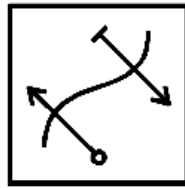


(3) (c)

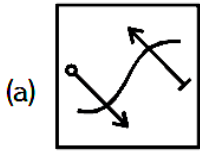


(4) (d)

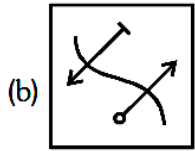
77.



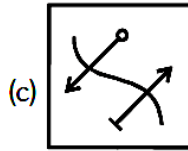
(X)



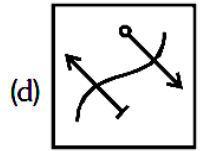
(1) (a)



(2) (b)

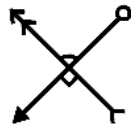


(3) (c)

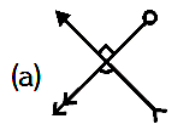


(4) (d)

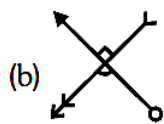
78.



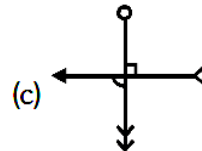
(X)



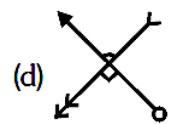
(1) (a)



(2) (b)

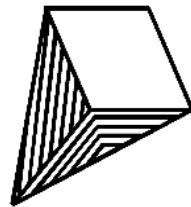


(3) (c)

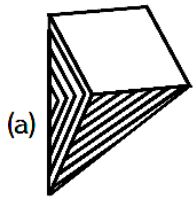


(4) (d)

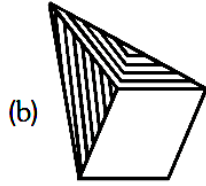
79.



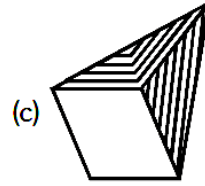
(X)



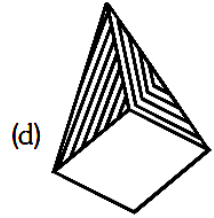
(1) (a)



(2) (b)

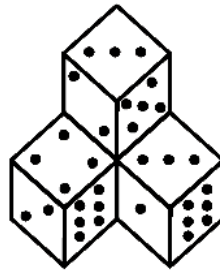


(3) (c)

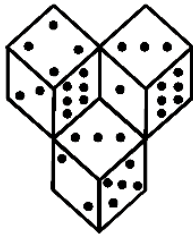


(4) (d)

80.

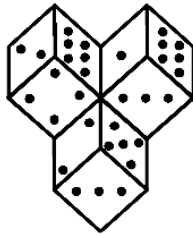


(X)



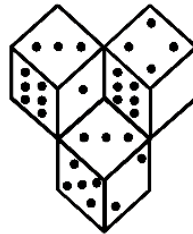
(a)

(1) (a)



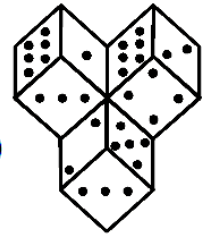
(b)

(2) (b)



(c)

(3) (c)

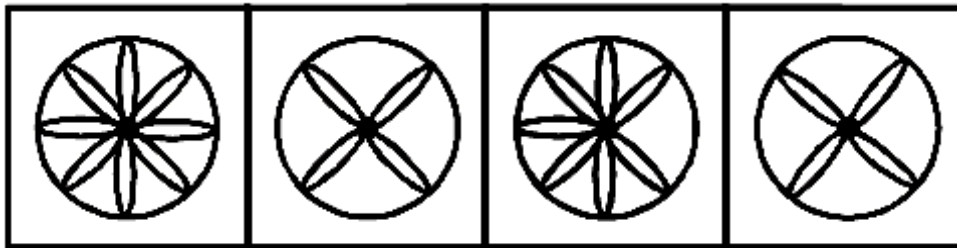


(d)

(4) (d)

Directions: (Q: 81 to 85): In each of the following questions, choose the figure which is different from the test

81.



(1) 1

(1)

(2) 2

(2)

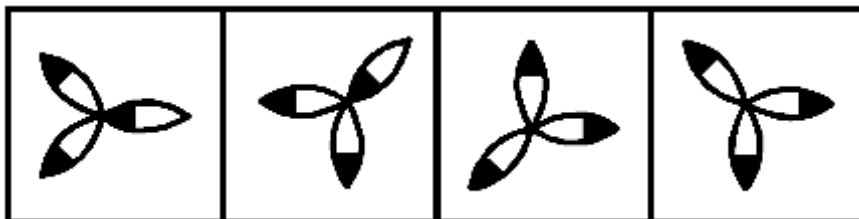
(3) 3

(3)

(4) 4

(4)

82.



(1)

(2)

(3)

(4)

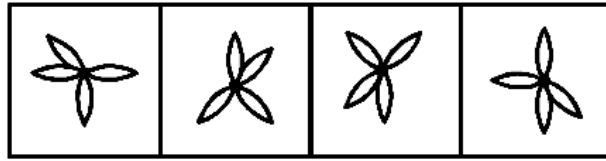
(1) 1

(2) 2

(3) 3

(4) 4

83.



(1)

(2)

(3)

(4)

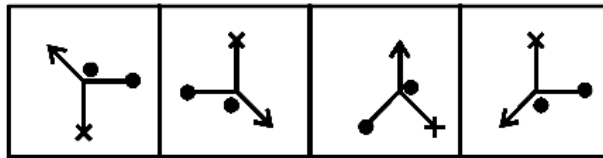
(1) 1

(2) 2

(3) 3

(4) 4

84.



(1)

(2)

(3)

(4)

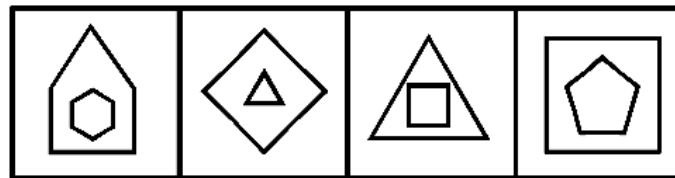
(1) 1

(2) 2

(3) 3

(4) 4

85.



(1)

(2)

(3)

(4)

(1) 1

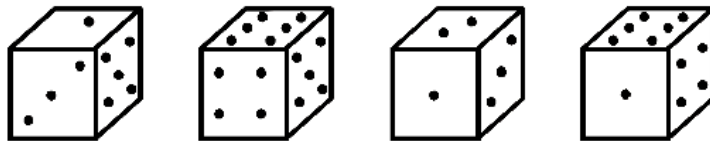
(2) 2

(3) 3

(4) 4

Directions: (Q: 86 to 90):

86. How many points will be on the face opposite to face, which contains 2 points?



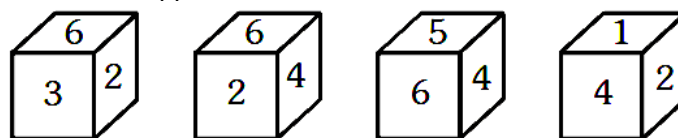
(1) 1

(2) 5

(3) 4

(4) 6

87. Which number is on the face opposite to 6?



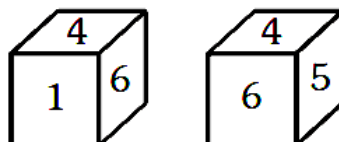
(1) 4

(2) 1

(3) 2

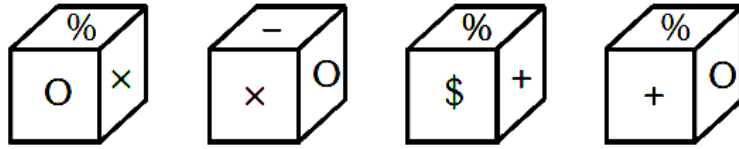
(4) 5

88. Two positions of a dice are shown below. When number '1' is on the top, what number will be at the bottom?



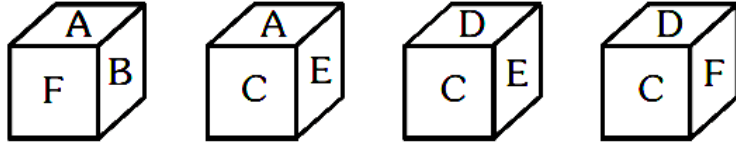
- (1) 3 (2) 5 (3) 2 (4) 6

89. Here 4 positions of a cube are shown. Which sign will be opposite to '+'?



- (1) % (2) - (3) x (4) \$

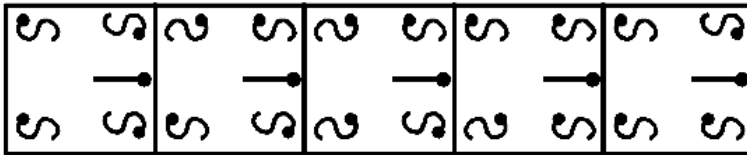
90. The position of a cube are shown below. Which letter will be on the face opposite to face with A?



- (1) D (2) B (3) C (4) F

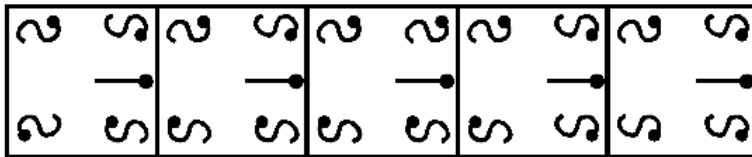
Directions (Q: 91 to 95): Each of the following questions consists of five figures marked A, B, C, D and E called the problem figures; followed by five other figures marked 1, 2, 3, 4 and 5 called the answer figures. Select a figure which will continue the same series as established by the five problem figures.

91. Problem figures



- (A) (B) (C) (D) (E)

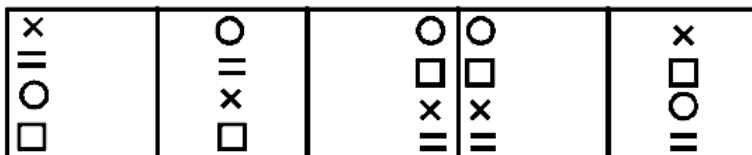
Answer figures



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

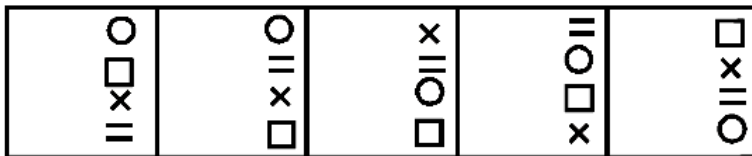
- (1) 1 (2) 2 (3) 3 (4) 4

92. Problem figures



- (A) (B) (C) (D) (E)

Answer figures



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

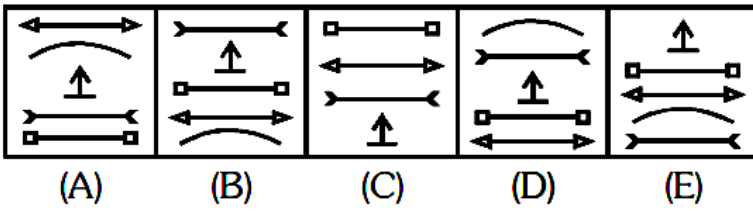
(1) 1

(2) 2

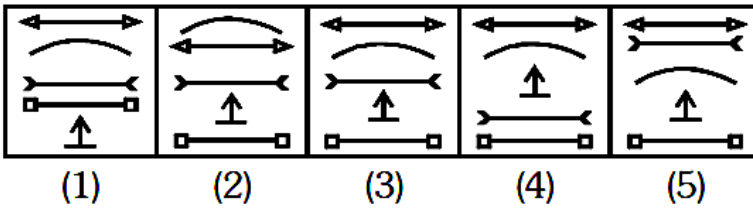
(3) 3

(4) 4

93. Problem figures



Answer figures



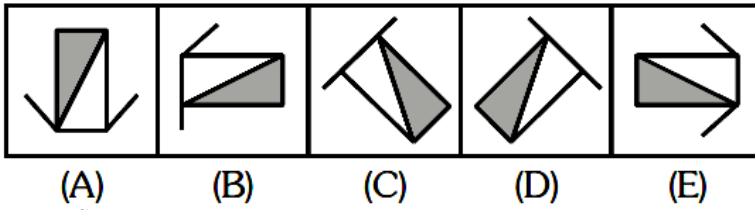
(1) 1

(2) 2

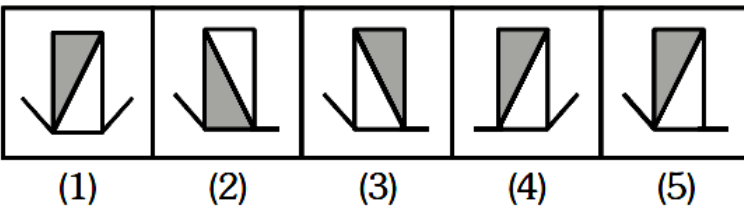
(3) 3

(4) 4

94. Problem figures



Answer figures



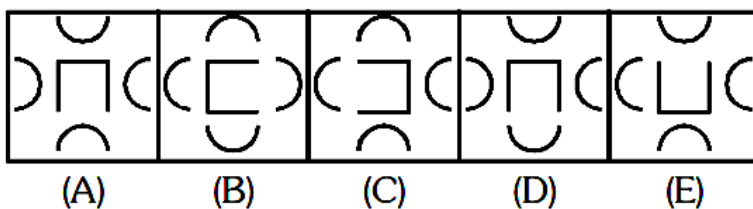
(1) 1

(2) 2

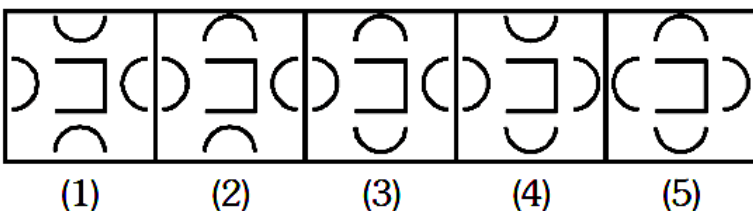
(3) 3

(4) 4

95. Problem figures



Answer figures



(1) 1

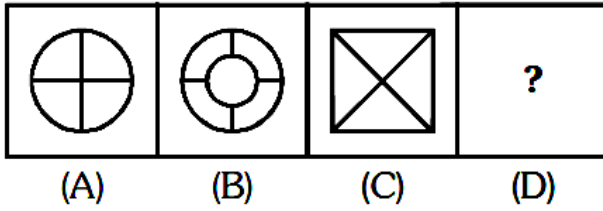
(2) 3

(3) 2

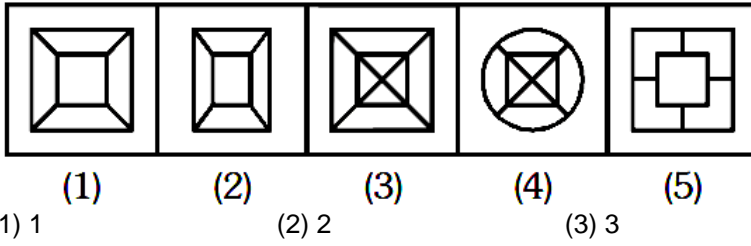
(4) 5

Directions: (Q: 96 to 100): Each of the following questions consists of two sets of figures. There is a definite relationship between figures A and B. Establish a similar relationship between figures C and D by selecting suitable figure from the answer set.

96. Problem figures



Answer figures



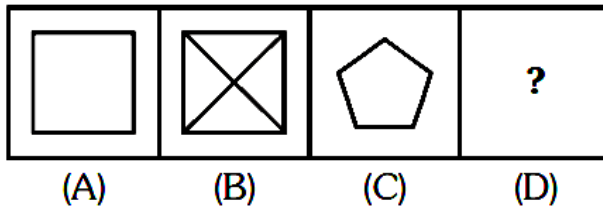
(1) 1

(2) 2

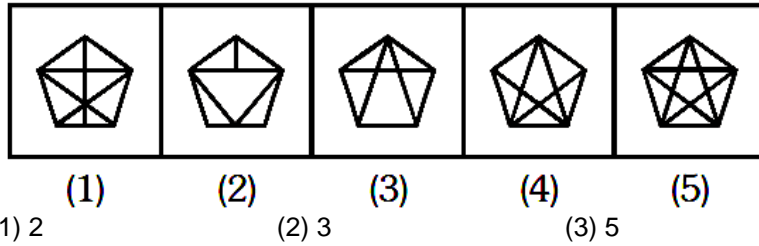
(3) 3

(4) 4

97. Problem figures



Answer figures



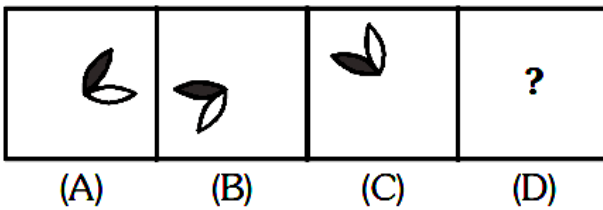
(1) 2

(2) 3

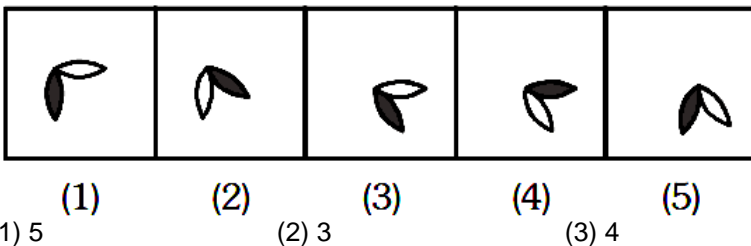
(3) 5

(4) 4

98. Problem figures



Answer figures



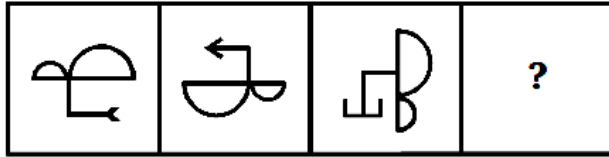
(1) 5

(2) 3

(3) 4

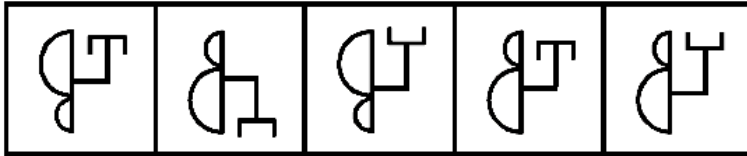
(4) 1

99. Problem figures



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

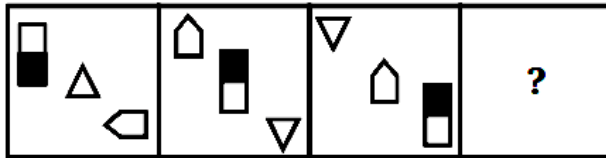
Answer figures



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

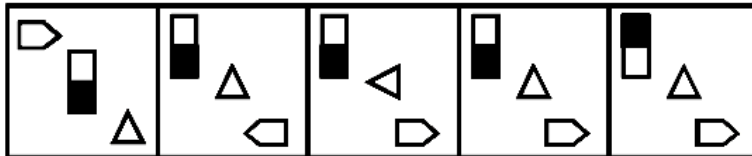
(1) 4 (2) 5 (3) 2 (4) 3

100. Problem figures



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

Answer figures



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

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