

CHANDIGARH NTSE STAGE – I (2019-20)

MENTAL ABILITY TEST

ROLL NUMBER:

Time: 120 Minutes

Maximum Marks: 100

Please read the instructions carefully.

Instructions to the Candidates

Read the following instructions carefully before you answer the question:

1. Answer are to be given on a SEPARATE ANSWER SHEET.
2. Please write your twelve digits Roll Number very clearly on the Test-booklet and Answer Sheet as given in your admission card.
3. Please note and follow the instructions given on the answer sheet for writing the answers.
4. Darken the CIRCLE with pen for answering the question in the appropriate space against the number corresponding to the question you are answering.
5. There are 100 questions in the test.
6. Since all questions are compulsory, do not try read the whole question paper before beginning to answer it.
7. If you do not know the answer to any question, do not spend much time on it and pass on to the next one. Time permitting, you can come back to the question, which you have left in the first instance and try them again.
8. Since the time allotted for this question paper is very limited you should make the best use of it by not spending too much time on any one question.
9. Rough work can be done anywhere in the booklet but not on the answer sheet/loose paper.
10. Every correct answer will be awarded one mark.
11. Please return the answer sheet to the invigilator after the test.

Please turn over the page and start your work.

Mental Ability Test

Direction-(1-5) There is number series following a pattern, one blank is left, to fill the blank find the number/word from given alternatives.

1. 3, 7, 16, 35, 74 _____
(A) 150 (B) 153
(C) 161 (D) 163
2. 38, 49, 62, 70, 77 _____
(A) 82 (B) 81
(C) 97 (D) 91
3. 3, 4, 13, 4, 5, 21, 5, 6, 31, 7, 6 _____
(A) 55 (B) 42
(C) 57 (D) 45
4. 1, 8, 9, 64, 25, 216, 49 _____
(A) 343 (B) 512
(C) 1001 (D) 81
5. AY, CW, EU, GS _____
(A) JO (B) LN
(C) IQ (D) DV

Direction (6-10) Three terms are alike in certain way and one is different, Find that odd/wrong/different term

6. 2, 12, 36, 80, 152, 252
(A) 252 (B) 152
(C) 12 (D) 40
7. 2, 3, 8, 27, 110, 565
(A) 110 (B) 8
(C) 27 (D) 565
8. 12, 14, 18, 26, 38, 60, 74
(A) 26 (B) 74
(C) 18 (D) 60
9. (A) AEDCB (B) KONML
(C) QSTUR (D) HLKJI
10. (A) ANRYAAH (B) DGRHAAIHCN
(C) ANHTAJASR (D) BNJUAP

Direction-in question (11-15) Analyze the series and fill the gap.

11. a __ ba __ bb __ __ bb __ a __
(A) aabbaa (B) abbbab
(C) baaaab (D) baaaba
12. __ aab __ caa __ bbc __ a __ b __ ca
(A) abaaba (B) abaaab
(C) cbacaa (D) abcbaa
13. __ bc __ __ bb __ aab __
(A) ababc (B) acacc
(C) aaccb (D) babcc
14. 23 __ 4 __ 1 __ 53 __ __ 3 __ 41
(A) 514322 (B) 513242
(C) 254312 (D) 514225
15. 10 __ 2 __ 02 __ __ 022
(A) 2122 (B) 2121
(C) 2101 (D) 1022

Direction (16-20) Two terms before sign :: have some relationship between them. Analyzing relationship develop same kind of relationship among the terms after sign :: and answer among alternatives

16. 321 : 12 :: 524:?
 (A) 29 (B) 33
 (C) 35 (D) 31
17. 23 : 127 :: 47:?
 (A) 423 (B) 525
 (C) 345 (D) 341
18. 24 : 816 ::35:?
 (A) 2527 (B) 2725
 (C) 2716 (D) 618
19. XVR: WWS::DXK:?
 (A) LCY (B) CYL
 (C) YCL (D) RLY
20. RP: 89 :: TH:?
 (A) 104 (B) 420
 (C) 410 (D) 424

Direction (21-24) Find the missing character.

21.

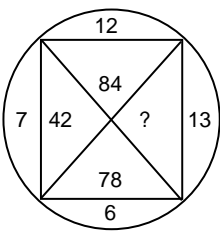
23	24	48
32	33	54
34	17	?

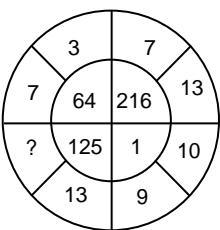
 (A) 58 (B) 63
 (C) 93 (D) 84

22.

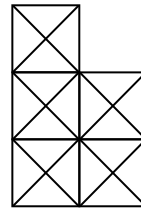
37	61	71
47	53	41
59	?	43

 (A) 29 (B) 67
 (C) 84 (D) 62

23. 
 (A) 26 (B) 156
 (C) 39 (D) 70

24. 
 (A) 10 (B) 8
 (C) 112 (D) 124

Direction (25-27) Answer the question based on diagram



25. How many squares are there
 (A) 10 (B) 12
 (C) 15 (D) 14
26. How many rectangles are there excluding squares
 (A) 10 (B) 13
 (C) 15 (D) 12
27. How many triangles are in given figure.
 (A) 56 (B) 57
 (C) 54 (D) 43
28. How many straight lines in given figure
 (A) 10 (B) 12
 (C) 14 (D) 16

Direction-According to code language words in the column are given and their codes are given in column-II, Decode the language and choose the correct code for the words in questions (29-35) among given alternatives.

Column-I	Column-II
LASER	Inmcq
HEAVY	nstmz
WATER	hxqkm
PLANE	menfe
SHOCK	xlyzd
MIRTH	wzkaq
STONE	xnlke

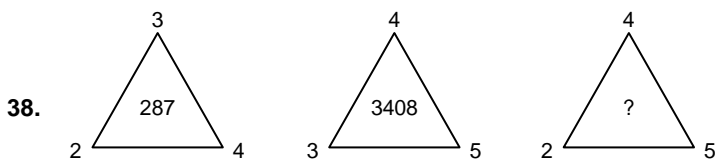
29. Code for E
 (A) n (B) m
 (C) q (D) s
30. Code for A
 (A) x (B) z
 (C) d (D) m
31. Code for S
 (A) x (B) l
 (C) c (D) a
32. Code for L
 (A) m (B) e
 (C) c (D) z
33. Code for R
 (A) z (B) k
 (C) l (D) q
34. In a certain code language, 134 means 'Good and Tasty', 478 means 'see Good Picture', and 729 means 'Picture are faint'. Which of the following numerical symbols stands for 'See'?
 (A) 4 (B) 2
 (C) 7 (D) 8

Direction (35-37) study the following information carefully and answer the questions that follows:

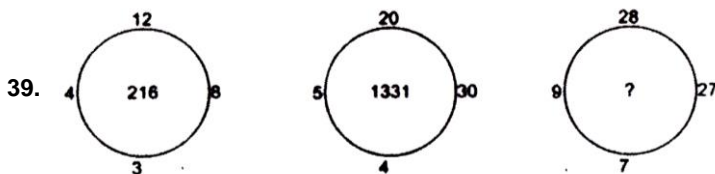
A, B, C, D, E, F and G are seven kids playing in the garden. They are wearing clothes of colours-black, blue, white, green, pink, yellow and brown. Out of seven, three are girls. No girl is wearing either black, yellow or brown. D's sister F is wearing pink while he is wearing brown. A is wearing blue, while his sister B is not wearing green. E is wearing yellow, while his best friend G is a boy.

35. What colour is B wearing?
 (A) Green (B) Pink
 (C) Brown (D) None of these
36. What colour is G wearing?
 (A) Black (B) Blue
 (C) White (D) Green
37. What colour is C wearing?
 (A) Black (B) Green
 (C) White (D) None of these

Direction: Find the missing character in questions (38-39) such that it follows some rule:



- (A) 3385 (B) 3395
 (C) 3412 (D) 297



- (A) 125 (B) 512
 (C) 1728 (D) 343

40. At what time between 4 and 5 O' clock will the hands of clock coincides.
 (A) $32\frac{10}{11}$ minute past 4 (B) $21\frac{9}{11}$ minute past 4
 (C) $21\frac{10}{11}$ minute past 4 (D) 22.5 minute past 4
41. India got independence on FRIDAY, What will be the day on which Indians will celebrate the independence day in 2047
 (A) Thursday (B) Friday
 (C) Sunday (D) Tuesday
42. If 2nd day of a month is Tuesday, which will be the fifth day from 20th day of that month?
 (A) Tuesday (B) Wednesday
 (C) Thursday (D) Friday.
43. If $G+I=130$ then H_L will be equal to
 (A) 20 (B) 144
 (C) 206 (D) 208
44. P and Q are married couple, R and S are sisters. Q's son is S's father. How is P related to R?
 (A) Uncle (B) Mother
 (C) Grandmother (D) Father
45. Pointing to a boy, Rita said" His father is my son's only son". How is the boy related to Rita?
 (A) Son (B) Daughter
 (C) Grand daughter (D) Great Grand Son

46. In a row, A is 8th from the left and B is 17th from the right. If they interchange their positions A becomes 14th from the left. How many persons are there in the row?
 (A) 25 (B) 27
 (C) 31 (D) 30
47. Suresh left home for the bus stop 10 minutes earlier than the usual time and reached the bus stop at 9.25 a.m., he takes another 20 minutes to reach office. If Suresh usually reach office 5 minutes before office time then at what time today he reached office?
 (A) 9.00 am (B) 8.00 am
 (C) 10.00 am (D) 9.30 am

Direction Questions (48-51) are based upon the sum of addition, each letter has unique value and for unique value there is unique letter. If E = 4

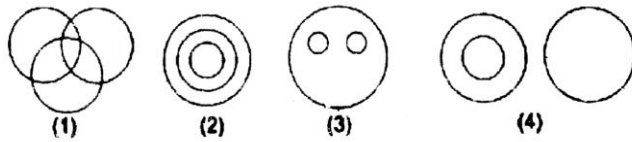
$$\begin{array}{r} \text{LET} \\ + \text{THE} \\ \hline \text{LOSS} \end{array}$$

48. Value of S
 (A) 4 (B) 2
 (C) 5 (D) 6
49. Value of H
 (A) 3 (B) 6
 (C) 9 (D) 7
50. Value of L
 (A) 4 (B) 3
 (C) 1 (D) 2
51. Value of T
 (A) 8 (B) 9
 (C) 7 (D) 2
52. If NTSE = 58, NMMS = 59 then PSTSE = ?
 (A) 79 (B) 62
 (C) 56 (D) 48
53. If OM = 195, HARI = 1296 then RAM = ?
 (A) 186 (B) 294
 (C) 1392 (D) 234

Direction – in questions (54-55) mathematical sings have no meaning. Find clue and target answer.

54. $3 \times 4 \times 4 = 82$
 $9 \times 3 \times 4 = 93$
 $7 \times 7 \times 7 = 89$
 $5 \times 8 \times 7 = ?$
 (A) 95 (B) 69
 (C) 86 (D) 89
55. $46 - 3 = 12$
 $64 - 9 = 12$
 $? - 6 = 3$
 (A) 62 (B) 43
 (C) 28 (D) 24

Directions (56-58) in the following question three classes are given, out of the following four figures that follow, you are to indicate which figure will represent the relationship amongst the three classes.



56. Beverages.

Tea,

Coffees

57. Triangle,

Rectangle,

Polygon

58. Patiala,

Punjab,

Gujarat

Direction – six faces of a cube are painted in a manner that no two adjacent faces have the same colour. The three colours used are red, blue and green. The cube is cut into 36 cubes in a manner that 32 cubes are of smaller same size and 4 cubes are of bigger size. Each bigger cube has no red face.

59. How many cubes in all have red face?

- (A) 8
(C) 20

- (B) 16
(D) 32

60. How many cubes have only one face coloured?

- (A) 0
(C) 8

- (B) 16
(D) 20

61. How many cubes have three faces painted?

- (A) 8
(C) 16

- (B) 20
(D) 28

62. How many cubes have only two faces painted?

- (A) 28
(C) 16

- (B) 20
(D) 8

63. Rohit is facing west. He turns 45° in the anticlockwise direction and then 180° in the clockwise direction. Which direction is he facing now?

- (A) North
(C) East

- (B) North-East
(D) South-East

64. Rajan moves 3 meters in north direction then he moves 4 meters in east direction. How far is he from the starting point?

- (A) 7 meters
(C) 4 meters

- (B) 5 meters
(D) 1 meters

65. 36 Vehicles are parked in single row. After the first car there is one scooter, after the second car there are two scooters. After the third car there are three scooters. How many scooters are in the second half of the row?

- (A) 17
(C) 12

- (B) 15
(D) 10

66. Which word cannot be formed from RECOMENDABLE

- (A) COMENDOR
(C) ABLEGDOR

- (B) MENDRECO
(D) MOCABLE

67. Mansavi wants to go to the market. She starts from her house which is in north and comes to the crossing. The road to her left ends in a park and straight ahead is the office complex. In which direction is the market?
- (A) East (B) North
(C) West (D) South

Direction (68-71) study the following information and answer the given questions:

In the following cases/questions in certain code language if

'+' means ','

'-' means 'x'

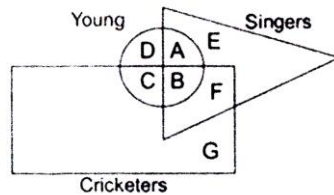
'x' means '+'

',' means '-'

68. $8 + 2 \times 5 - 3 = ?$
(A) 27 (B) 15
(C) 19 (D) 47
69. $9 - 2 \times 27 + 31 = ?$
(A) -51 (B) 180
(C) 26 (D) None of these
70. $16 + 2 - 3 \times 71 = ?$
(A) -3 (B) 30
(C) 105 (D) None of these
71. $49 + 7 - 5 \times 8 = ?$
(A) 16 (B) 22
(C) 43 (D) None of these

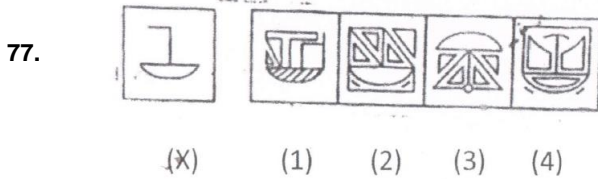
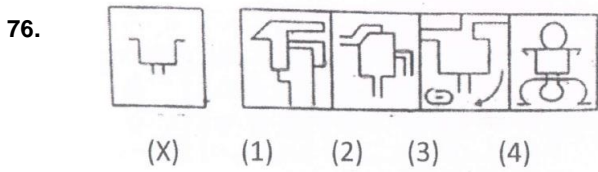
Direction (Question 72 -75) study the following information and answer the given question:

In the following figure 'Rectangle represents Cricketers', 'Circle represents Young' and 'Triangle represents Singers':-

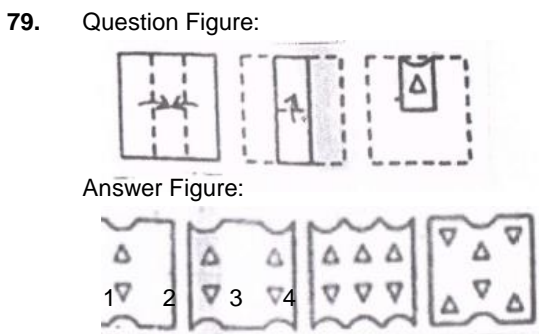
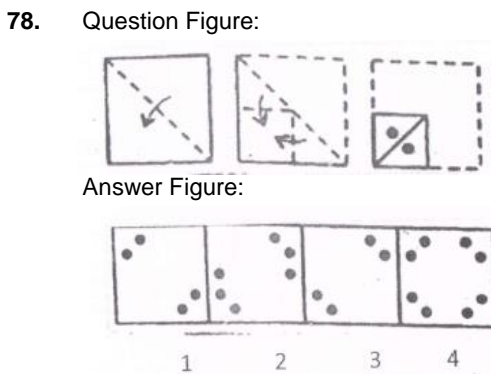


72. Which region represents Young Cricketers who are not singers?
(A) B (B) G
(C) C (D) F
73. Which region represents Old Cricketers who are not singers?
(A) B (B) G
(C) F (D) C
74. Which region represent Young people who are neither Cricketers nor Singers?
(A) A (B) D
(C) B (D) C
75. Which region represents Cricketers who are Singers but not young?
(A) E (B) A
(C) C (D) F

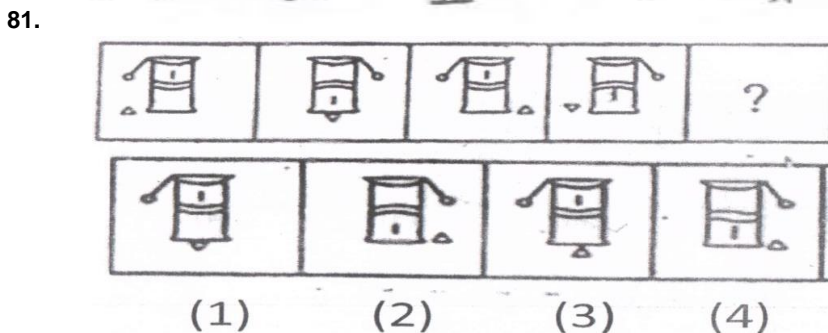
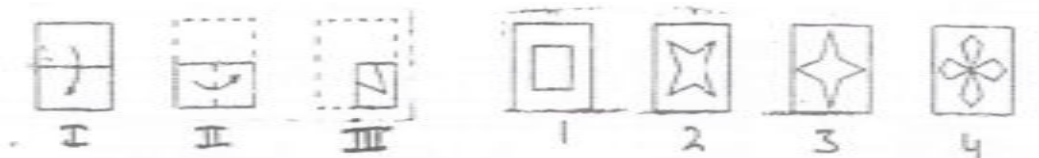
Direction – Figure (X) is embedded in which of the following four alternatives.



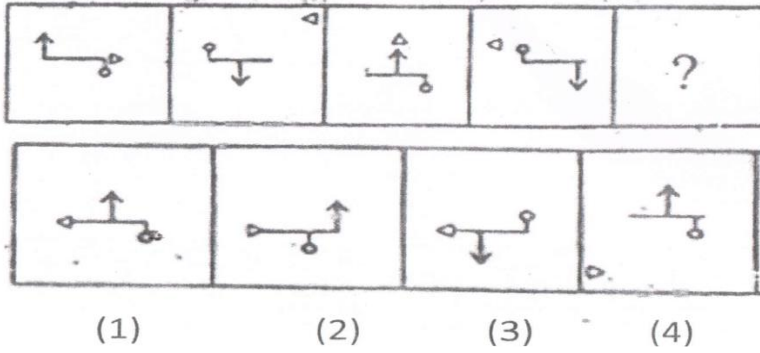
Direction (78–79) – A piece of paper is folded and cut is made as shown below. From the given responses indicate how it will appear when opened/



80. Direction- Three figures marked I, II, III have one fold at 1, 2nd fold at II and is cut in figure III. From among the four alternatives which will show the unfolded position of figure III.



82.



Direction – In the following question, there are four question figures followed by the answer figures labelled as (1), (2), (3) and (4). The four question figures make common series. Find the correct figures from answer figures which will complete the series.

83. Question

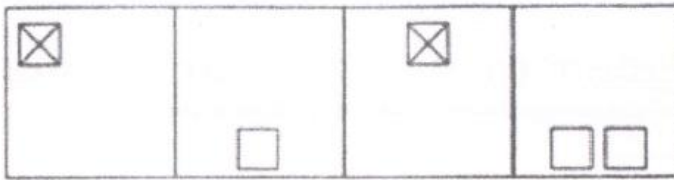
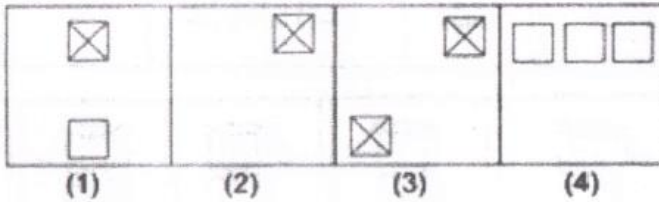
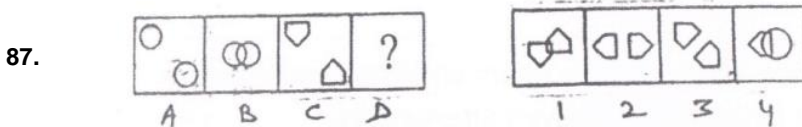
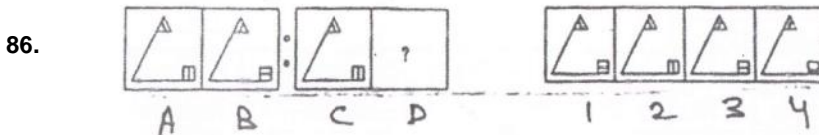
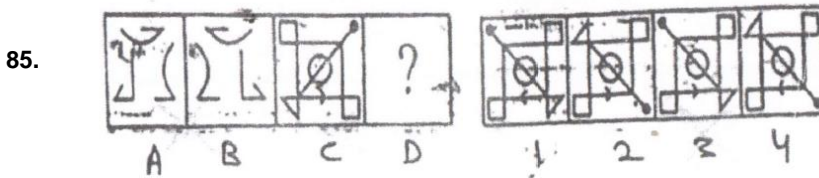
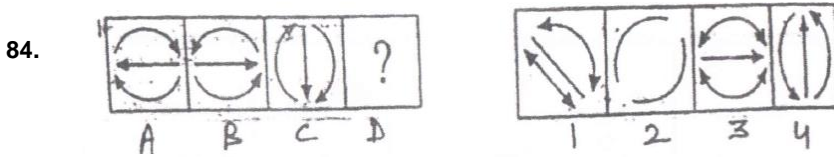


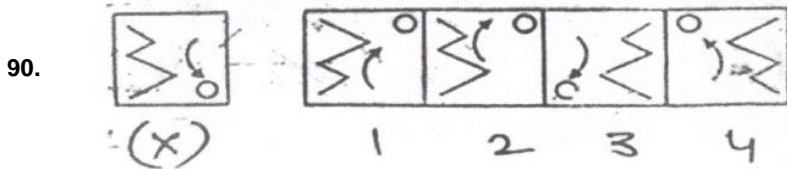
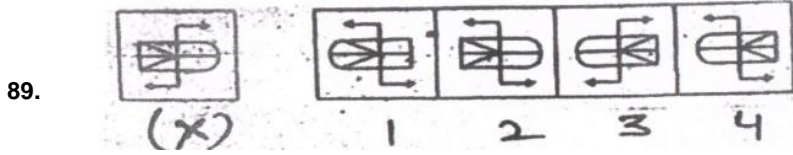
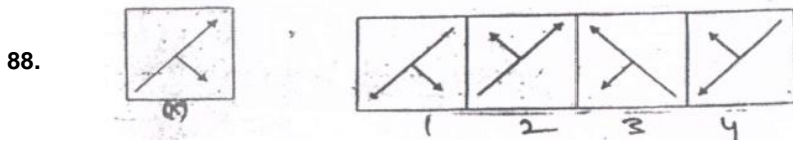
Figure:



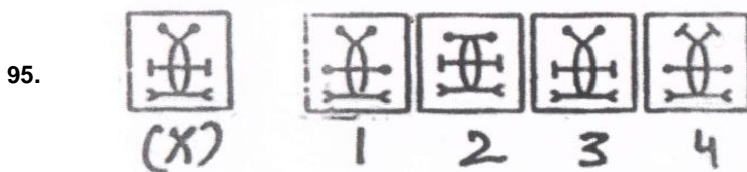
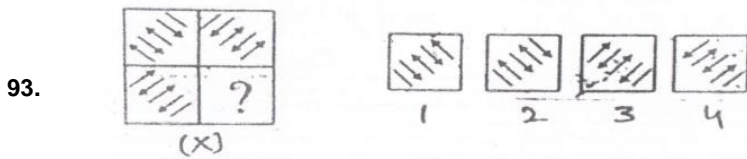
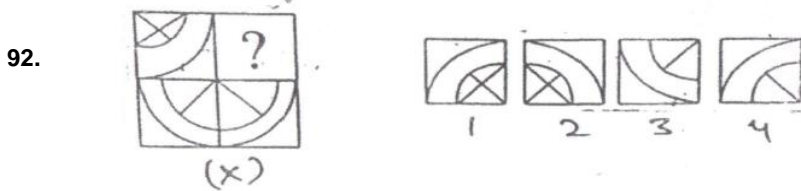
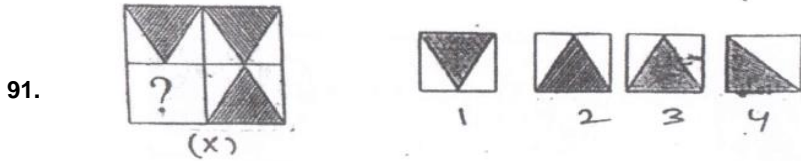
Direction – Figure A and B are related in a particular manner. Establish the relationship between C and D by choosing figure among four alternatives.



Direction – Find the mirror image of figure(X).

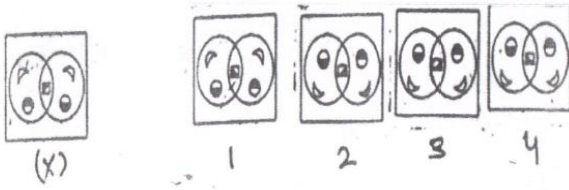


Direction – Complete the given figure (X) among alternatives.

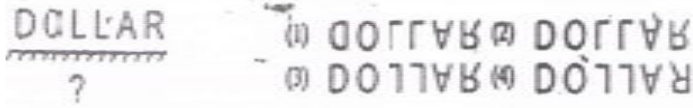


Direction – Find the water image of (X).

96.

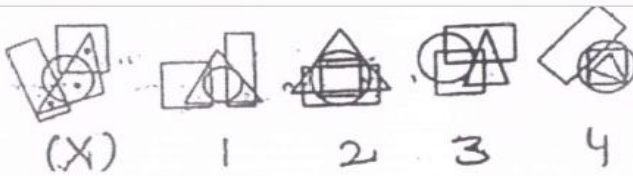


97.

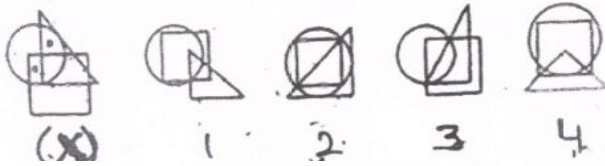


Direction – In questions, select among the alternative which satisfy the same condition of placement of dots as in the given figure (X).

98.



99.



100.

