

STATE LEVEL EXAMINATION QUESTION BOOKLET

MENTAL ABILITY TEST

CLASS X

MEDIUM : ENGLISH WITH MARATHI VERSION

[DATE : 4TH NOVEMBER, 2018]

[Time : 10:30 A.M. to 12:30 A.M.]

MAXIMUM MARKS: 100

TIME: 120 MINUTES

TOTAL PAGES : 52

INSTRUCTIONS TO CANDIDATE

Read the following instructions carefully before you answer the questions. Answers are to be given on the separate answer sheet.

1. Please write your Centre Code and Seat No. very clearly (only one digit in one block). Before writing your Seat No. get it ascertained from the centre Conductor. Please see that no block is left unfilled and even zeros appearing in the centre Code and Seat No. are correctly transferred to the appropriate blocks on the booklet and on the answer sheet.
2. All questions carry one mark each.
3. Since all questions are compulsory do not try to read question after another till you finish.
4. Begin with the first question and keep on trying one question after another till you finish.
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. Time permitting you can come back to the questions which you have left in the first instance and try them again.
6. Since the time allotted is very short you should make best use of it. The rough work is to be done in the box given under each page.
7. Remember you have to mark on your answers in "Mental Ability Test" answer-sheet only.
8. Answer to each question is to be indicated in the answer sheet by encircling with black pen provided to you in the appropriate number of alternatives in the answer-sheet from amongst the ones given for the corresponding question in the test booklet.
9. Do not write anything except Centre Code, Seat No. and rough work anywhere in this booklet.
10. Now turn to the next page and start answering the questions.

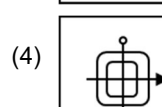
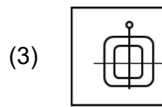
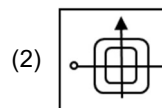
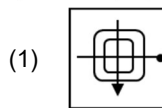
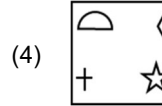
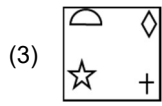
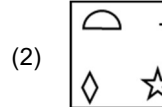
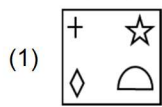
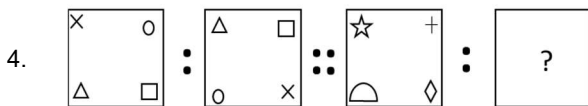
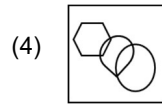
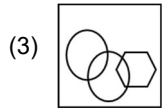
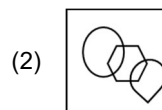
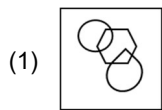
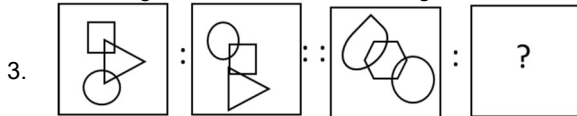
NTSE-2018 Mental Ability (MA)

Each question has four choices (1), (2), (3) and (4), out of which **ONLY ONE** is correct.

Direction (For Q. NO. 1 & 2): Find the odd term.

1. (1) ABDEF (2) JKMNX
(3) GHJKR (4) IJLMT
2. (1) CEG18 (2) KMO42
(3) UWY70 (4) RTV63

Direction (For Q. NO. 3 to 5): In the following questions there is a specific relation between the first and the second figure. The same relationship exists between the third and the fourth figure which will replace the question mark. Select the correct figure from the alternatives given below each question.



6. ABCDEFGHIJKLMNOPQRSTUVWXYZVUTSRQPON

From the above letter series find the letter which is at the 6th position to the right side of the letter which is at the centre position of the letters which are at the 11th place from the left and 14th place from the right.

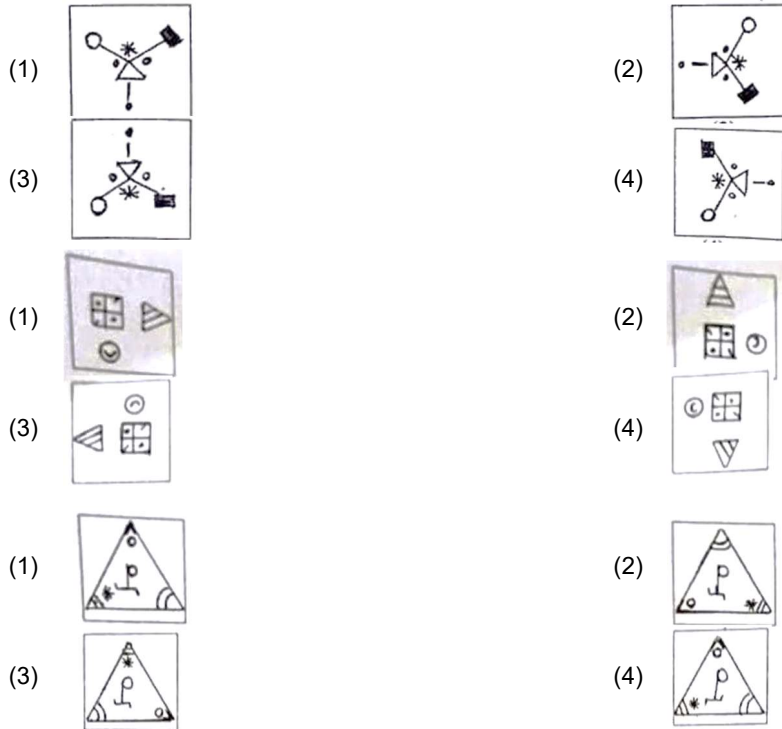
- (1) U (2) F
(3) Y (4) L

7. In the following question there is a specific relation between the first and second term. The same relationship exists between third and fourth term. Understanding the relationship find out the correct alternative to replace the question mark.

25 : 100 :: 81 : ?

- (A) 648 (B) 468
(C) 864 (D) 684

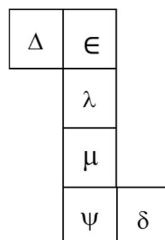
Direction: (Q. 8 to 10): Find the odd figure.



Direction (Q. NO. 11 to 14): In each of the following questions write which term in the sequence replaces the question mark.

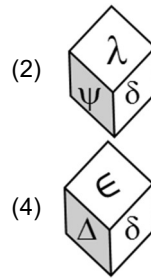
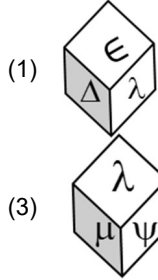
- 11. 13, 23, 43, 83, 163, ?
 - (1) 326
 - (2) 323
 - (3) 321
 - (4) 318
- 12. 12, 15, 21, 24, 30, 33, ?, ?
 - (1) 36, 41
 - (2) 37, 42
 - (3) 38, 47
 - (4) 39, 51
- 13. 16, 40, 100, 250, ?
 - (A) 575
 - (B) 625
 - (C) 425
 - (D) 525
- 14. 23, 29, 47, 75, ?
 - (A) 87
 - (B) 93
 - (C) 110
 - (D) 117

Direction (Q. NO. 15 to 17): The adjacent figure is folded to form a cube. Observe the figure and answer the following questions.

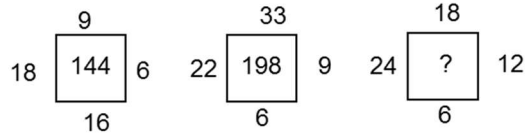


- 15. Which of the following symbol will not occur adjacent to ε ?
 - (A) μ
 - (B) δ
 - (C) λ
 - (D) ψ
- 16. Which of the following symbol will be on the opposite surface of the symbols λ ?
 - (A) Δ
 - (B) ψ
 - (C) δ
 - (D) μ

17. Which of the following figure obtained by folding the paper to form a cube?

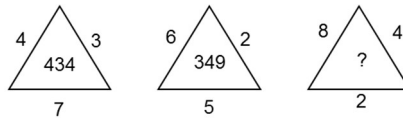


Direction (Q.No. 18 & 19) : There is a specific relationship between the numbers that are given in the following figures. On the basis of the relationship choose the correct alternative to replace the question mark.



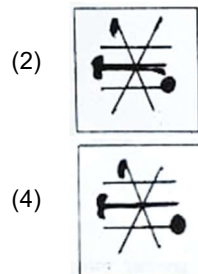
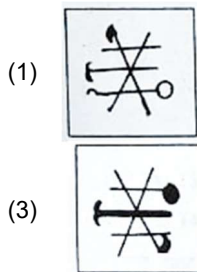
- | | |
|---------|---------|
| (1) 210 | (2) 266 |
| (3) 288 | (4) 318 |

19.

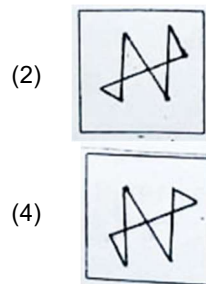
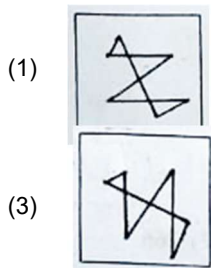


- | | |
|---------|---------|
| (A) 473 | (B) 623 |
| (C) 389 | (D) 584 |

20.



21.



Direction (Q. No. 22 to 24) : Observe the arrangement of numbers that is given below. There is a specific rule in that arrangement. Study that rule carefully and choose the correct alternative to replace the question marks.

	104	
8	85	64
	13	

22.

	154	
14	221	196
	?	

- (1) 11 (2) 13
(3) 15 (4) 17

23.

	315	
15	261	?
	21	

- (1) 125 (2) 90
(3) 105 (4) 225

Direction (Q.No. 25 TO 27): In the following questions there is a specific relation between the first and the second term. The same relationship exists between the third and the fourth term. Understanding the relationship find out the correct alternative to replace the question marks.

25. FILM : ADGH :: MILK : ?

- (A) ADGE (B) HDGE
(C) HEGF (D) HDGF

26. MK : $\frac{169}{121}$:: JH : ?

- (A) $\frac{16}{4}$ (B) $\frac{25}{4}$
(C) $\frac{64}{100}$ (D) $\frac{121}{64}$

27. ? : DURXQG :: POLICE : SROLFH

- (A) ARMOUR (B) AROUND
(C) GROUND (D) SHOULD

Direction (Q. No. 28 to 30): Meena, Sarika, Geeta and Neeta are four friends. They like different flowers. Geeta and Sarika like Marigold, Except Meena all the friends like 'Jai' Meena and Sarika like 'Champak' and 'Mogra'. Geeta likes all the flowers except 'Mogra'. Neeta does not like only 'Marigold'. Meena likes only two types of flowers then

28. Who likes all types of flowers?

- (A) Neeta (B) Sarika
(C) Meena (D) Geeta

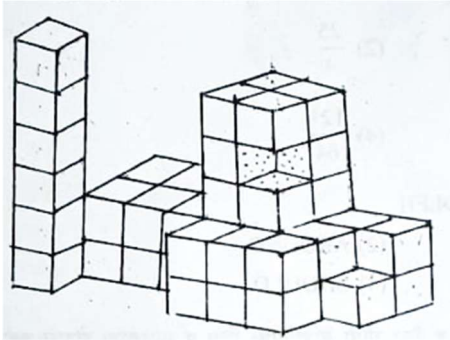
29. Name the type of flower, that all the friends like?

- (A) Marigold (B) Mogra
(C) Meena (D) Geeta

30. Who do not like 'Marigold'?

- (A) Meena and Sarika (B) Meena and Geeta
(C) Meena and Neeta (D) Sarika and Neeta

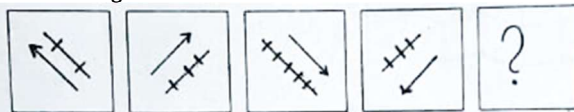
Direction (Q. 31 to 33) : The following figure is made by joining some cubes of size 1 x 1 x 1 unit to each other. Outer surface of the figure are painted. Observe the figure and answer the questions by choosing the correct alternative.



31. Find the maximum number of faces of a cube that may have been painted.
 (A) 5 (B) 4
 (C) 3 (D) 2
32. Find the number of cubes having no face painted?
 (A) 0 (B) 1
 (C) 2 (D) 3
33. How many small cubes are used to form the given figure?
 (A) 50 (B) 48
 (C) 52 (D) 46
34. In a certain code language
 $3 \times 2 = 29$; $4 \times 5 = 74$;
 $7 \times 3 = 58$;then, $6 \times 8 = ?$
 (A) 134 (B) 118
 (C) 116 (D) 132
35. In a certain code language
 $11 + 5 = 36$; $22 + 6 = 58$;
 $33 + 7 = 82$; then, $55 + 9 = ?$
 (A) 112 (B) 163
 (C) 136 (D) 124

Direction (Q. 36 & 37): In each of the following questions the question figure change in a particular order. Decide which figure from the given alternatives will replace the question mark.

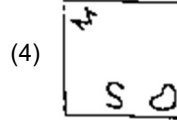
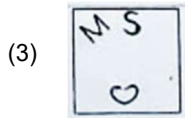
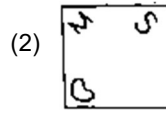
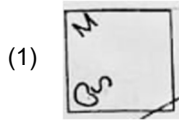
36. Question figure



Answer figure

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

37. Question figure



38. In the following question there is a specific rule between the letters and the numbers in each horizontal row. Identify the rule and choose the correct alternative to replace the question mark.

AD	17	39	CF
BP	258	108	HJ
GH	?	?	LM

- (1) 9, 29
 (3) 179, 239

- (2) 18, 210
 (4) 203, 181

39. Choose the correct alternative to replace the question mark.

D		H
K	M	X
G		P

M		J
R	B	P
E		F

L		C
S	G	L
G		I

N		U
O	?	W
A		B

- (1) H
 (3) J

- (2) I
 (4) K

Direction (Q. NO. 40 & 41) : Ajit walked 5 km . East from A. After turning left he walked 3 km . Then he turned in South – east direction and walked 5 km . Then he turned west and walked 4 km . Finally he turned left and walked 12 km . Then

40. How far Ajit is from his original place?

- (A) 13 km
 (C) 18 km

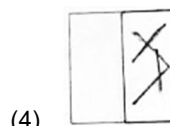
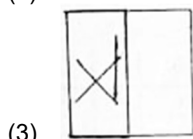
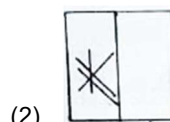
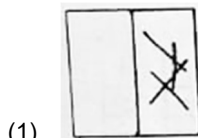
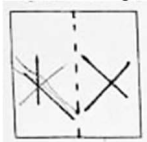
- (B) 17 km
 (D) 7 km

41. Ajit is facing which direction now?

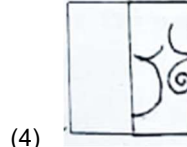
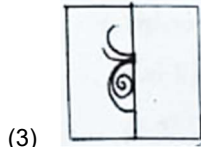
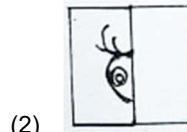
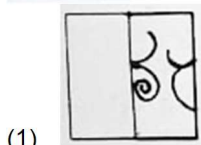
- (1) East
 (3) West

- (2) South
 (4) North

42. Question figure



43. Question figure



Direction : (Q. NO. 44 to 47) In the following questions choose the correct term that will replace the question mark.

44. AYC, EUG, JPL, CWE, ?

- (1) HRJ
(3) JPL

- (2) IQK
(4) KOM

45. NTS, OUT, PTS, ?

- (1) QWV
(3) QTP

- (2) QRS
(4) QPO

46. AMZN, BLYO, CKXP, ?

- (1) DQJW
(3) DIWR

- (2) DJWQ
(4) DWJQ

47. JBY, NIV, SOS, YTP, ?

- (1) EVM
(3) FYL

- (2) BVG
(4) FXM

Direction:(Q.NO. 48 to 50) Observe the following pyramid of letters and decide which alternative will be in place of question mark in each of the following question.

```

      a
    c   b
  d   e   f
j   i   h   g
  k   l   m   n   o
u   t   s   r   q   p
  v   w   x   y   z   a   b
j   i   h   g   f   e   d   c
    
```

48. acdj : ? :: eilt : ehng

- (A) abfg
(C) acei

- (B) acdi
(D) abfh

49. vihx : uwxt :: ? : pazq

- (A) abde
(C) dbaz

- (B) bdez
(D) azed

50. jktljt : goqngq :: ilsmis : ?

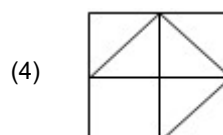
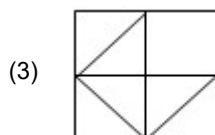
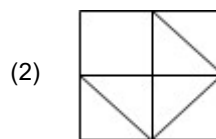
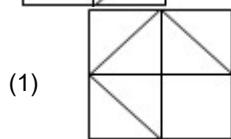
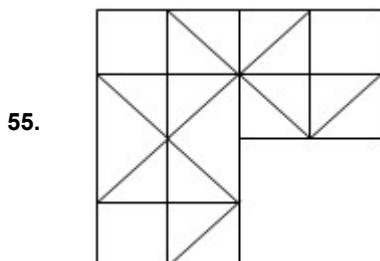
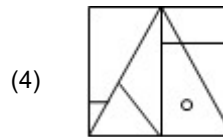
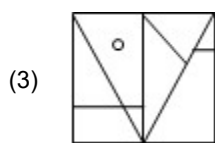
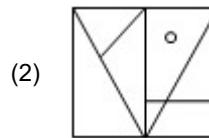
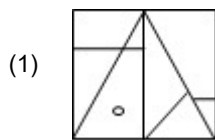
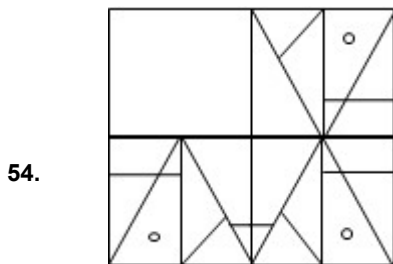
- (A) hnrnhr
(C) hnrnhn

- (B) hnmnr
(D) hrnmhn

Direction (51 to 53): Eight players are standing to play 'Standing Kho-Kho' Geeta is at third place to the right of Mahesh. Amar is to the first place to the right of Geeta Asha is to fourth place to the left of Geeta. Radha is at central place between Parag and Asha. Meena is at the central place between Geeta and Hemant. Then

51. Who is standing opposite to Hemant?
 (1) Amar (2) Parag
 (3) Radha (4) Geeta
52. Who is standing between Parag and Geeta?
 (1) Hemant (2) Mahesh
 (3) Amar (4) Meena
53. Who is at the fourth place to the left of Geeta?
 (1) Mahesh (2) Asha
 (3) Parag (4) Radha

Direction (54 to 55): Complete the question figure by choosing the correct answer figure.



56. $\Delta O \square \oplus$, $O \square \oplus \Delta$, $\square \oplus \Delta O$
 (1) $\oplus \Delta \square O$ (2) $\oplus \Delta O \square$
 (3) $\oplus O \square \Delta$ (4) $\oplus \square \Delta O$

57. $\alpha n f \theta \lambda, \lambda \alpha n f \theta, \theta \lambda \alpha n f, ?$

- (1) $f \theta \lambda n \alpha$
- (2) $n f \theta \lambda \alpha$
- (3) $f \theta \lambda \alpha n$
- (4) $n \theta \lambda \alpha f$

Direction (58 to 59): Ten years ago the ratio of the ages of Ramesh and Suresh was 1 : 5 . Ten years hence the ratio of their ages will be 3 : 5 then

58. Find the present age of Ramesh?

- (1) 14 years
- (2) 10 years
- (3) 40 years
- (4) 24 years

59. How old was Suresh ten years ago?

- (1) 9 years
- (2) 20 years
- (3) 40 years
- (4) 30 years

Direction (58 to 59): In a queue, Suneeta is at the tenth place from front. Subhash is 25th place from behind. Gargi is standing at the central place between suneeta and Subhash. there are 50 persons in the queue. Then

60. Gargi is standing at which place from front?

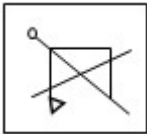
- (1) 20
- (2) 19
- (3) 18
- (4) 17

61. Gargi is at which place from behind?

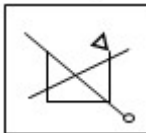
- (1) 31
- (2) 32
- (3) 33
- (4) 34

Direction (62 to 63): Choose the correct water image from the given alternatives for the given question figure.

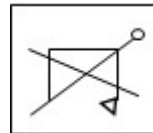
62.



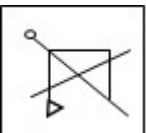
(1)



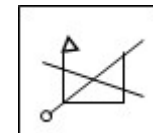
(2)



(3)



(4)



63.



(1)



(2)



(3)



(4)



Direction (64 to 64): In the following questions in every row the numbers outside the bracket are related to the number inside the bracket in a specific manner. from the given alternatives choose the number that will replace the question mark.

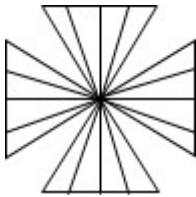
64. 37 (46) 60
 121 (74) 158
 318 (?) 269
 (1) 184 (2) 248
 (3) 98 (4) 79

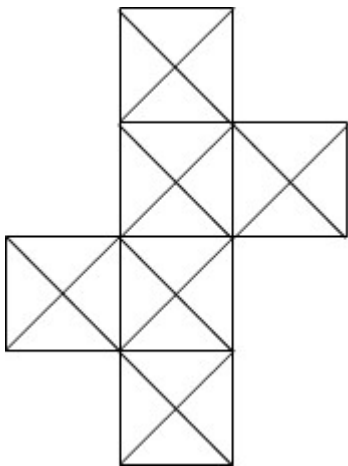
65. 35 (36) 73
 64 (38) 27
 43 (?) 58
 (1) 39 (2) 52
 (3) 101 (4) 119

Direction (66 to 68): In the following questions a specific group of terms is given. Form the given alternatives, find out the correct term that matches the given group.

66. JGDA ZWTQ UROL
 (1) LIGD (2) SPMK
 (3) LIFC (4) NKHF
67. AGM DJP HNT
 (1) GNT (2) EKP
 (3) IOV (4) KQW
68. BFYU GKTP FJUQ
 (1) AEZW (2) DHWS
 (3) IMRO (4) CGXS

Direction (69 to 70): Find the number of triangles in the following figures.

69. 
 (1) 16 (2) 32
 (3) 40 (4) 80

70. 
 (1) 48 (2) 50
 (3) 58 (4) 62

Direction (71 to 73): In certain code languages the word PACK is written in four different code languages. understanding the code, find out the correct code language for the word given in each of the following questions.

- PACK = (1) TEGO
- (2) MXZH
- (3) VFGO
- (4) QDHR

- 71. RAIN = NXFK
- 72. CROP = DUTW
- 73. SAND = WERH

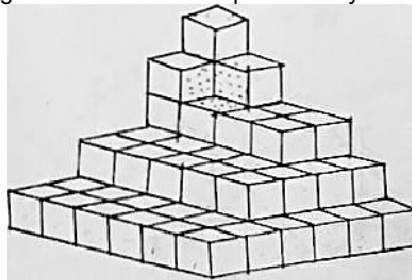
Direction (74 to 75): After folding a square piece of paper, it appears as shown in the question figure. The paper when unfolded will like look as shown in one of the alternatives. Select the correct alternative.

- 74. (1)  (2) 
- (3)  (4) 
- 75. (1)  (2) 
- (3)  (4) 

Direction (76 to 77): A rhythmic arrangement of alphabet is given. The missing alphabet appears in the same order in one of the alternative answer, choose the correct alternative.

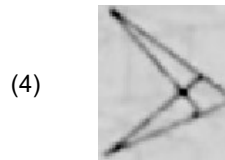
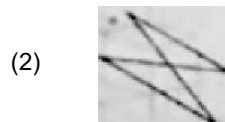
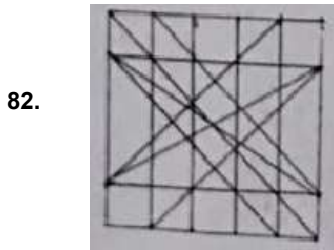
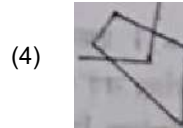
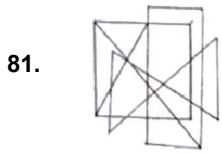
- 76. _ b c _ a b _ c a a b c
 - (1) acb
 - (2) bab
 - (3) aba
 - (4) aac
- 77. a b b _ b a a _ a _ b a b _ a b
 - (1) abab
 - (2) ccac
 - (3) aabb
 - (4) abba

Direction (78 to 80): The following figure is made by arranging some cubes having each side 1 unit. The figure is painted from all the sides. Observe the figure and answer the questions by choosing the correct alternative.



- 78. How many cubes are there at the base level?
 - (1) 18
 - (2) 24
 - (3) 36
 - (4) 216
- 79. How many cubes are there having three faces painted?
 - (1) 8
 - (2) 10
 - (3) 15
 - (4) 20
- 80. How many cubes are there having no face painted?
 - (1) 3
 - (2) 2
 - (3) 0
 - (4) 4

Direction (81 to 82): In the given question figure a complex figure is given. Find which of the figure given in the alternatives is hidden in the complex figure.



Direction (83 to 85): In the following questions a specific group of numbers is given from the given alternatives, choose the correct alternative that matches the given group.

83. 78 26 54

- (1) 52
(3) -6

- (2) 6
(4) 31

84. 738 4930 2210

- (1) 1341
(3) 222

- (2) 6877
(4) 518

85. 41 21 69

- (1) 89
(3) 107

- (2) 87
(4) 105

Direction (86 to 87): In the following questions symbol are given in column I and are coded in column II. But they are not arranged according to the order of symbols in column I. Find the code language and choose the correct alternative to answer the questions.

Column I	Column II
	378
	459
	275
	814

86. = ?

- (1) 143
- (2) 237
- (3) 549
- (4) 943

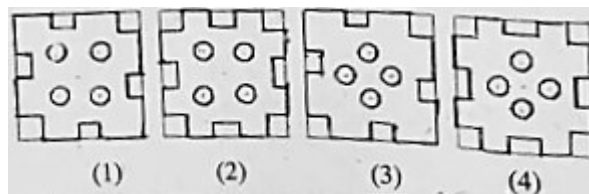
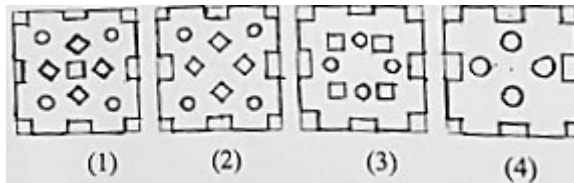
87. 135 = ?

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

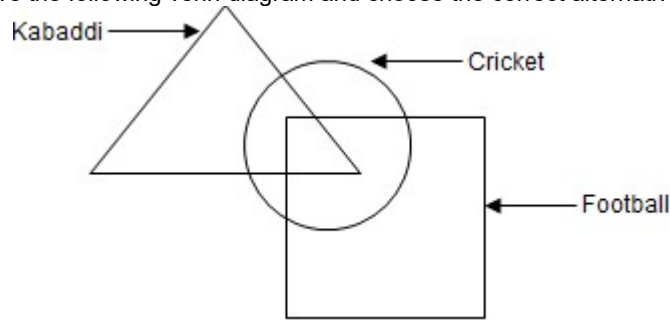
88. observe the following code language and choose the correct alternative to answer question.

- (1) SATPLE
- (2) SATAPLE
- (3) STAPLE
- (4) SATPLE

Direction (89 to 90):A square place of paper is folded and cut at specific spots as shown in the figure. the paper when unfolded will look like as shown in one of the alternative



Direction (91 to 93): Observe the following venn diagram and choose the correct alternative to answer the question.



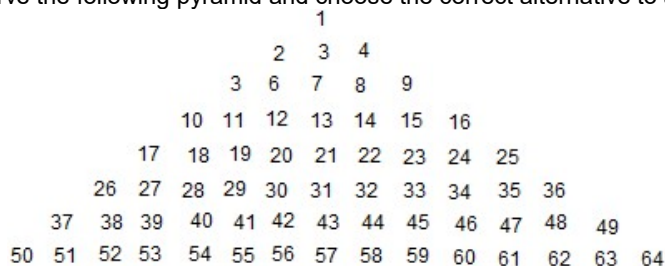
- 91. How many players play only kabaddi and cricket?
 (1) 24 (2) 72
 (3) 58 (4) 31
- 92. How many players play only one game?
 (1) 151 (2) 216
 (3) 183 (4) 210
- 93. How many players do not play cricket and football?
 (1) 24 (2) 58
 (3) 64 (4) 72
- 94. In a mathematical language if Δ means \times , \square means $-$ and \square means \div then find the value of the following expression $3 \square 5 \square 18 \square 3 \square 2 \Delta 3 = ?$
 (1) -6 (2) 0
 (3) 6 (4) -3
- 95. In a mathematical language if \div means $+$, $+$ means \times , \times means $-$ and means \div then find the value of the following expression $4 \div 8 - 2 - + - 5 \times 7 = ?$
 (1) 33 (2) 23
 (3) 17 (4) -4

Direction (96 to 97): in the following table the digits are assigned with certain symbols. Observe carefully and choose the correct alternative to answer the questions.

Digits	9	8	7	6	5	4	3	2	1	0
Symbol	₹	?	!)	%	(\$	#	Δ	\wedge

- 96. How will you write the number 8 7 4 6 0 5 3 ?
 (1) $? !) (\% \wedge \$$ (2) $! ?) (\% \wedge \$$
 (3) $? ! () \wedge \% \$$ (4) $! ? () \wedge \% \$$
- 97. Which number will be expressed by the code $(\% ! \$ ₹) \Delta \# ?$
 (1) 4 7 5 9 3 6 1 2 (2) 4 5 7 3 9 6 1 2
 (3) 4 7 5 3 9 6 1 2 (4) 4 5 7 9 3 6 1 2

Direction (98 to 100): Observe the following pyramid and choose the correct alternative to answer the question



- 98. $52262839 : 62363447 :: 54283041 : ?$
 (1) 60343245 (2) 54283042
 (3) 60343244 (4) 60463244

99. 2567 : 4987 :: 7256 : ?

(1) 7894

(3) 7498

(2) 7489

(4) 7948

100. 51820 : 82422 :: 121920 : ?

(1) 142223

(3) 191220

(2) 231524

(4) 142322