SAMPLE PAPER-01 MENTAL ABILITY TEST

Directions (Q.1 to Q.3): In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative.

1. ab _ cc _ abb _ cc _ bbc _ c
(1) abcca (2) bccba
(3) bcaba (4) bccac

2. _ xyx _ xxy _ xxx _ xxy _ y
(1) xyxyx (2) xxyyy
(3) xxyxy (4) yyyyx

3. M – MN – MNNN – NNN – MNN
(1) NNMN (2) MMNN
(3) NNNN (4) MNMN

4. Ecology is related to environment in the same way as Histology is related to
(1) Hormones (2) Tissues
(3) Bones (4) Histology

Direction (Q.5 & Q.6) : Find the missing number in the given series

5. 17, 33, 70, 131, 278?
(1) 581 (2) 531
(3) 541 (4) 575

6. 5, 25, 61, 113, 181?
(1) 265 (2) 375
(3) 275 (4) 365

7. If ROYAL is coded as 18, 4, 25, 1, 12. What is the code for LIVES?
(1) 12, 4, 23, 5, 8 (2) 12, 2, 19, 22, 1
(3) 12, 4, 1, 15, 22 (4) 12, 3, 22, 2, 19

8. If DIVE is coded as 9, 19, 45, 11. What is the code for YEAR?
(1) 51, 11, 3, 37 (2) 25, 11, 5, 37
(3) 51, 11, 5, 36 (4) 25, 11, 3, 36

9. If POCKET is coded as JKWOUF, what is the code word for BEAUTY?
(1) XUYEFA (2) YXZFGA
(3) YTZGVB (4) UYXAFE

10. In Vinod's bag, except six books all remaining books all remaining books are English books and except six books all remaining books are Malayalam books. Then totally how many books are there in Vinod's bag?
(1) 9 (2) 10 (3) 15 (4) 12

Direction (Q.11 to Q.14) : Read the following information and answer the question 11 – 14 based on it

(i) The length, breadth and height of a rectangular piece of wood are 4 cm, 3 cm are 5 cm respectively
(ii) Opposite sides of 5 cm × 4 cm are coloured in white
(iii) Opposite sides of 4 cm ×3 cm are coloured in black
(iv) Rest 5 cm ×3 cm are coloured in yellow in both sides
(v) Now the places are cut in such a way that a cube 1 cm ×1 cm ×1cm will be made

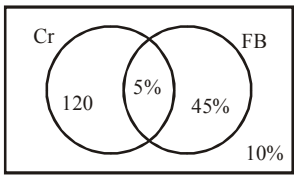
11. How many cubes shall have only one colour?
(1) 20 (2) 22 (3) 18 (4) 16

12. How many cubes have all the three colours?
(1) 10 (2) 12 (3) 8 (4) 6

13. How many cubes shall not have any colour?
(1) 6 (2) 8 (3) 10 (4) 12

14. How many cubes shall have only two colours white and yellow in their two sides?
(1) 10 (2) 14 (3) 16 (4) 12

Direction (Q.15 to Q.17) : In a region, it was observed that 120 people liked only cricket 45% of the people liked only football 5% of the people liked both cricket and football. 10% of the people liked neither cricket nor football



15. How many people like exactly one game?
(1) 255 (2) 180 (3) 165 (4) 170

16. How many people do not like any of the two games?
(1) 10 (2) 20 (3) 30 (4) 40

17. How many people like only football?
(1) 100 (2) 135 (3) 145 (4) 155

Direction (Q.18 & Q.19) : Given below is a series of letters, number and symbols study the series carefully and answer the question.

A Δ ϕ B 3 C 8 F ⌴ K W # * 6 N 5 * ⇑ P A Δ 7 B 4 5 ⌴ Q 6 ⇑ B ⌴

18. What is the ratio between the letters and numbers in the series? If a letter or number has been used more then once, it is to be counted as only
(1) 2 : 1 (2) 5 : 3 (3) 4 : 3 (4) 3 : 2

19. How many letters have symbols on their left as well as on their right?
(1) 1 (2) 2 (3) 3 (4) 4

Direction (Q.20 & Q.21) : Which of the following will come in the position of (?)

20. 4A, 10D, 22G, 46J, 94M?
(1) 168N (2) 128P (3) 190P (4) 156L

21. 2Z5, 7Y7, 14X9, 23W11, 34V13, ?
(1) 45U14 (2) 47U15
(3) 27W24 (4) 47V14

Direction (Q.22 to Q24) : Seven towns T_1, T_2, T_3, T_4, T_5, T_6 and T_7 are situated as follows :
T_5 is 8 km to the west of T_2
T_6 is 8 km to the north of T_1
T_4 is 8 km to the south of T_7
T_7 is 8 km to the east of T_3
T_3 is 4 km to the west of T_1
T_4 is exactly in the middle of T_2 and T_5

22. How far is T_1 from T_7 ?
(1) 8 km (2) 4 km (3) 6 km (4) 12 km

23. Raju starts from T_1 and goes to Mumbai via T_3 how much distance was covered by Raju if Mumbai is 4 km to the west of T_5 ?
(1) 6 km (2) 8 km (3) 4 km (4) 12 km

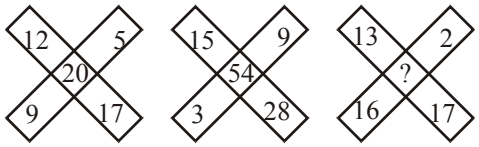
24. If Mumbai is located 4 km to the west of T_3 how far it would be form T_4
(1) 4 km (2) 12 km (3) 8 km (4) 6 km

25. If α represents' '+'
γ represents '–'
β represents '×'
δ represents ' ÷'
$\varnothing$ represents '=' which of the following is correct?
(1) 9 γ 2 α 10 δ 3 $\varnothing$ 14 β 4
(2) 9 α 2 β 10 γ 3 $\varnothing$ 14 δ 4
(3) 9 β 4 γ 14 α 10 δ 2 $\varnothing$ 27
(4) 9 δ 3 γ 2 α 10 $\varnothing$ 14 β 4

26. Read the information and answer the question.
Find friends R, S, T, U and X wore shirts of brown, yellow, green, pink and blue colours and shorts of white, black, grey, blue and yellow colours.
Nobody wore shirt and shorts of same colour.
T wore yellow shorts and U wore blue shirt
The one who wore yellow shirt wore white shorts and one who wore blue shots wore pink shirt
R wore black shorts and brown shirt
X did not water pink shirt
Who wore blue shorts?
(1) T (2) U (3) S (4) X

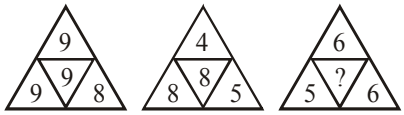
Direction (Q.27 & 28) : The numerals are given on the basis of some rule and one space is marked by (?). Find the correct answer from the four alterative to replace the question mark

27.



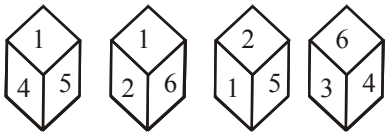
(1) 15 (2) 20 (3) 23 (4) 40

28.



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

29. Bases on various faces of a cube. Six sides of cube are numbered 1 to 6. Study the faces and answer the questions.



Which number is on opposite of 1?
(1) 3 (2) 4 (3) 5 (4) 6

30. What letter should replace the question mark?

F	J	P	L	G	P	K
R	K	F	I	N	F	J
X	F	V	G	U	J	?

(1) U (2) A (3) K (4) I

31.

	0	1	2	3	4	5	6	7	8	9
0	A	Q	E	R	C	X	0	N	E	H
1	D	G	B	F	Q	P	D	Y	K	M
2	X	M	L	M	K	P	C	J	W	V
3	N	P	U	S	B	Q	I	G	B	F
4	0	C	L	G	W	Y	H	T	U	A
5	H	I	Y	K	R	S	L	F	I	E
6	Z	N	0	V	J	A	G	J	z	D

The columns of the matrix are numbered from 0 to 9 and rows are numbered form 0 to 6. A letters form this matrix can be represented first by its row and next by its column. For example, N can be represented by 30 or 61 etc. Now find the answer for the following question.

Identify the set of numbers corresponding to the word MATCH
(1) 23, 10, 43, 40, 56 (2) 21, 49, 43, 41, 64
(3) 21, 65, 47, 26, 50 (4) 19, 46, 47, 04, 46

32. Question 32: In the following question two statements are followed by four conclusions numbered I, II, III and IV. You have to take the two given statements to be true even if they seem to be at variance form commonly known facts. Read all the conclusions together and then decided which of the given conclusions logically follows form the two given statements

Statements

(a) All red are green

(b) All green are white

Conclusions

(i) Some green are red

(ii) Some white are red

(iii) Some red are not white

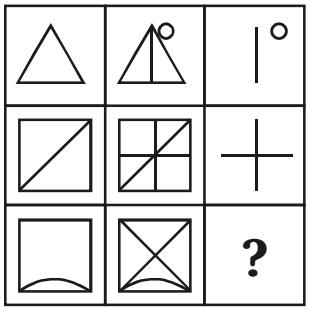
(iv) All white are green

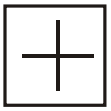
(1) Only I and II follows (2) Only II and III follows

(3) Only I and IV follows (4) Only I and IV follows

Direction (Q.33 & Q.34) : Each of the items 33-34 consists of a square of 9 cells in three rows and three columns. The designs in each row or column follow the same rule. Choose the correct answers form among the given alternatives to suit the cell indicated by the question mark

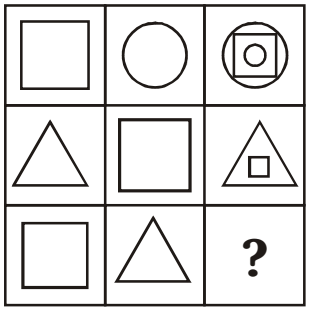
33.



(1)  (2) 

(3)  (4) 

34.



(1)  (2) 

(3)  (4) 

Direction (Q.35 & 36) : P, Q, R, S, T, U are six members of a family. P is son of R and T is the daughter of P, S is the daughter of U, who is the mother of T, Q is the spouses of R

35. How many male members are in the family?

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

36. Which of the following pairs represents parents?

(1) PR (2) RT (3) QT (4) PU

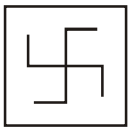
37. Problem Figure

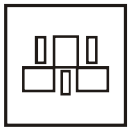
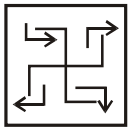
(1)  (2) 

(3)  (4) 

Problem Figure

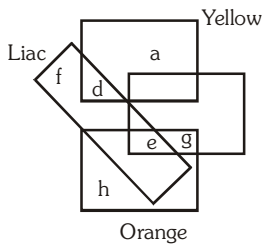
38.



(1)  (2) 

(3)  (4) 

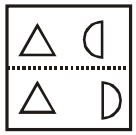
39. In the following diagram, there are four rectangles labeled as Liac, Yellow, Indigo and Orange. Rectangle 'Lilac' represents the persons who like Lilac, 'Yellow' for those who like Yellow, 'Indigo' for those who like Indigo and 'Orange' for those who like Orange. Study the diagram and carefully answer the question



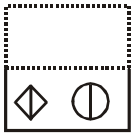
Persons who like Yellow and Lilac but not Indigo?

(1) d (2) f (3) a (4) b

Direction (Q.40 & Q.41) : In each of the questions a transparent sheet with a pattern is given. Find out from among the given alternatives as to how the pattern would appear when the transparent sheet is folded along the dotted line.

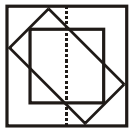
40. 

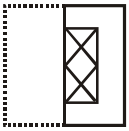
(1) 

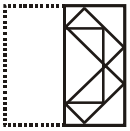
(2) 

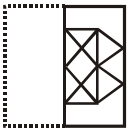
(3) 

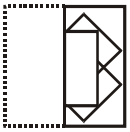
(4) 

41. 

(1) 

(2) 

(3) 

(4) 

42. Read the information carefully and answer the question 42.

P □ Q means P is the brother of Q

P Δ Q means P is the father of Q

P + Q means P is the mother of Q

P ∉ Q means P is the husband of Q

P – Q means P is the sister of Q

Four statements 1, 2, 3, 4 are given which statement is correct form the

(1) C is the father of E

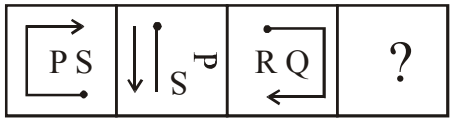
(2) D is the grandmother of F

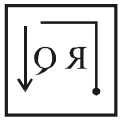
(3) B is the aunt of D

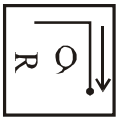
(4) A is the father of D

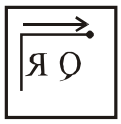
Direction (Q.43 to Q.45) : In the problem figures in each question there is a definite relationship between the first tow figures. From the set of the four answer figures given, find the figure that would establish the same relationship between the next tow figures

Problem Figures

43. 

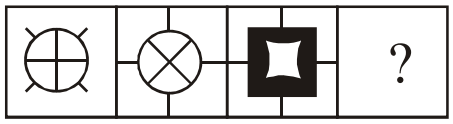
(1) 

(2) 

(3) 

(4) 

Problem Figures

44. 

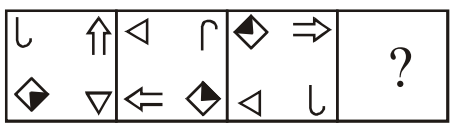
(1) 

(2) 

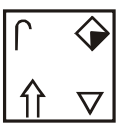
(3) 

(4) 

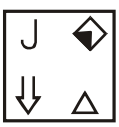
Problem Figures

45. 

(1) 

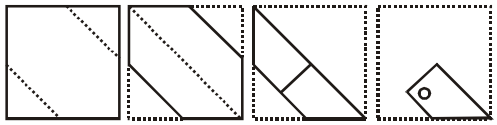
(2) 

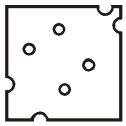
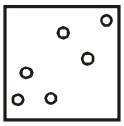
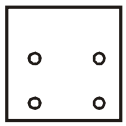
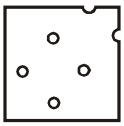
(3) 

(4) 

46. A piece of paper is folded and punched as shown below in the problem figures. How will it appear when opened? Choose your answer from the answer figures.

Problem Figure

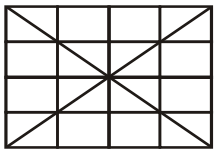


(1) 
(2) 
(3) 
(4) 

47. Find the mirror image of the word 'PIONEER'.

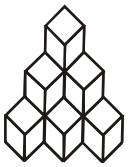
(1) ЯЗЕЕNIOЬ (2) ЯЗЕИOIЧ
(3) ЯЗЕЕNIOP (4) ЧOIИЕЕЯ

48. Find the number of triangles in the figure.



(1) 32 (2) 40 (3) 48 (4) 44

49. How many cubes are there in the following figure?



(1) 5 (2) 9 (3) 10 (4) 12

50. A mother said to her son " I was as old as you are at present time of your birth". If the mother's age is 36 years now the son's age 6 years back was

(1) 10 (2) 12 (3) 14 (4) 13

Directions (Q.51 to Q.55) : Complete the following number / letter / figural series by choosing from the given choices.

51. $\frac{2}{3}, \frac{10}{19}, \frac{26}{51}, \frac{50}{99}, \frac{82}{163}, ?$

(1) 104/173 (2) 112/183
(3) 114/193 (4) 122/243

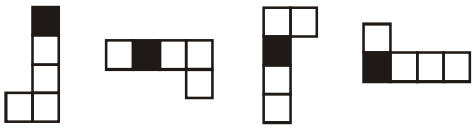
52. 2, 2, 5, 7, 11, 22, ?, ?

(1) 23, 35 (2) 23, 67
(3) 43, 77 (4) 63, 85

53. D G K P G J N S __M__V__PT__

(1) N Q U X (2) K N R W
(3) J Q M Y (4) L O R U

54. Figural series



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

55. Figural series

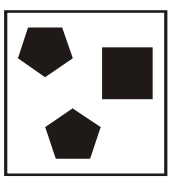
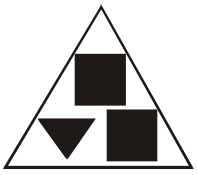
(1) 
(2) 
(3) 
(4) 

Directions (Q.56 to Q.59): In the given questions there are four groups of numbers / pairs of numbers / groups of letters / figures. Among them three are alike and one is different. Find the one which is different.

56. (1) 5 8 8 (2) 6 7 5 (3) 7 3 5 (4) 7 6 8

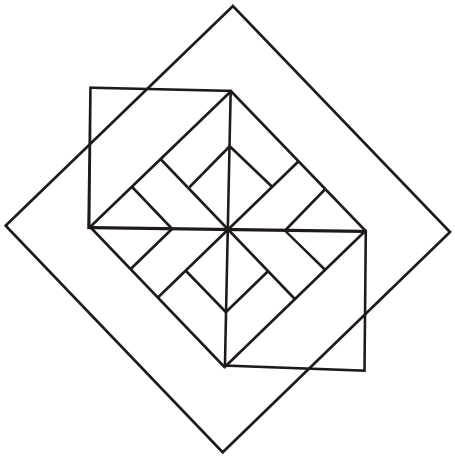
57. (1) 211, 41 (2) 338, 54
(3) 507, 69 (4) 734, 76

58. (1) G S K P (2) D W M N
(3) B Y E V (4) L O I R

59. (1) 
(2) 
(3) 
(4) 

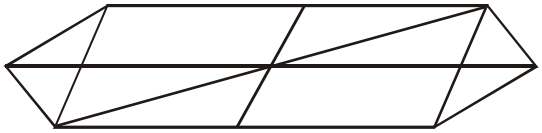
Directions (Q.60 to Q.62): Identify the number of specified geometric shapes in the given diagrams and mark the correct answer.

60. How many squares are there in the given figure ?



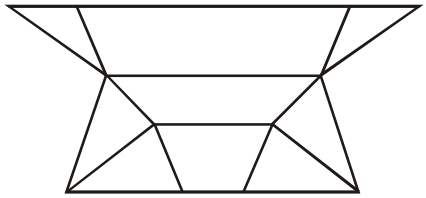
(1) 13 (2) 12 (3) 11 (4) 10

61. How many Triangles are there in the given figure?



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

62. How many Trapeziums are there in the given figure?



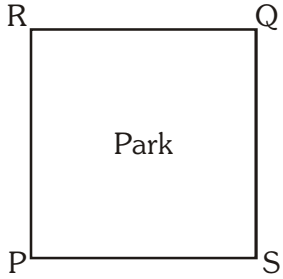
(1) 7 (2) 9 (3) 10 (4) 12

63. If MATHS is coded as GGNNM, then BOTANY can be written as

(1) VUNGHE (2) HUNGVE

(3) VNUGGH (4) HHUVVG

Direction (Q.64 & Q.65) :



P, R, Q and S are standing in the corners of a square shaped park with length L mts. as shown in the figure.

P and Q walk $\frac{1}{2}$ L mts. in clockwise direction, while R walks 2 L mts. in anti clockwise direction. S remains in the same corner.

64. Now, in which direction P is standing with respect to R, Q and S ?

(1) To the north of R and S

(2) To the north – west of R and S

(3) To the south of R and Q

(4) To the south – east of Q and S

65. If the length of the park L = 250 mts. find the total distance covered together by P, R, Q and S.

(1) 250 mts. (2) 375 mts.

(3) 500 mts. (4) 750 mts.

66. Choose and substitute the correct set of signs in place of (*) sequentially, selecting from the given alternatives to make the equations meaningful.

45 * 15 * 5 * 35 * 25 * 25

(1) –, ÷, ×, =, + (2) =, ÷, +, –, ×

(3) ÷, ×, +, –, = (4) ÷, +, ×, –, =

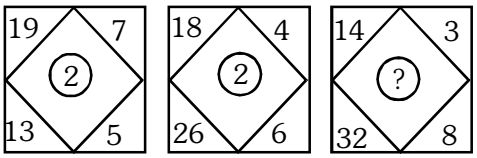
67. When interchange of ÷ and –; 4 and 2 are made, find which of the following equations would be correct.

(1) (16 – 2) × 3 = 11 (2) (32 – 2) ÷ 4 = 6

(3) (10 ÷ 4) + 5 = 12 (4) (30 ÷ 4) – 2 = 9

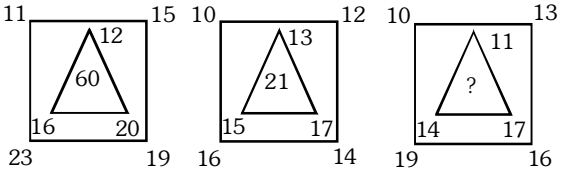
Directions (Q.68 & Q.69): In the questions below the numbers in the figures are related. Identify their relationship and find the missing numbers in the given figures.

68.



(1) 8 (2) 6 (3) 3 (4) 2

69.



(1) 65 (2) 55 (3) 50 (4) 48

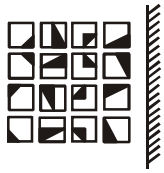
70. A newspaper has 8 sheets consisting in 32 pages in total and 4 pages in each sheets with all the pages printed. If page number 25 is not present in that newspaper, find the set of missing pages from the choices given below.

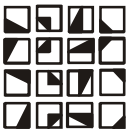
(1) 7, 8, 25, 26 (2) 3, 4, 25, 22

(3) 9, 10, 25, 24 (4) 12, 13, 25, 22

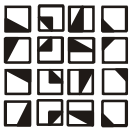
Directions (Q.71 & Q.72): Find the correct mirror images for the following problem figures choosing from the alternatives.

71. Problem Figures :



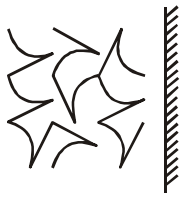
(1) 

(2) 

(3) 

(4) 

72. Problem Figures :



(1) 

(2) 

(3) 

(4) 

Directions (Q.73 & Q.74): Find the missing number in the given matrices.

73.

7	9	6
3	8	?
8	3	5
168	216	900

(1) 10 (2) 15

(3) 30 (4) 45

74.

163	16	115
215	19	158
276	23	?

(1) 207 (2) 216

(3) 237 (4) 246

Directions (Q.75 & Q.76): Find the missing part of the given figure from the alternatives.

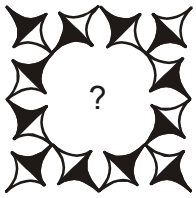
75. 

(1) 

(2) 

(3) 

(4) 

76. 

(1) 

(2) 

(3) 

(4) 

Directions (Q.77 to Q.81): Complete the given analogy by selecting the correct answers from the alternatives.

77. 16 : 105 :: 14 : ?

(1) 91 (2) 85

(3) 77 (4) 69

78. 343 : 441 ::? : 225

(1) 64 (2) 125

(3) 216 (4) 512

79.

H	G	:	19	20	::	?	?	:	8	9
E	F		22	21		?	?		11	10

(1)

P	Q
S	R

(2)

D	E
A	B

(3)

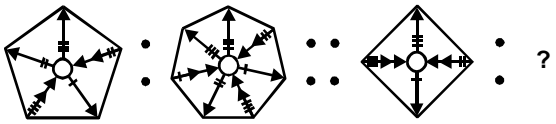
S	R
P	Q

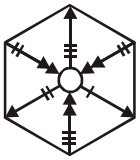
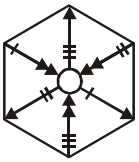
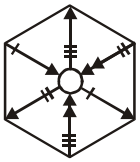
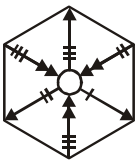
(4)

I	J
K	L

80.  ?

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

81.  ?

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

Directions (Q.82 & Q.83) : In a degree examination 75 students have appeared from a college for subjects physics, chemistry and mathematics. Among them,

(1) 12 students have passed in all subjects.

(2) 21 in physics only, 15 in chemistry only, 9 in mathematics only have passed.

(3) Equal number of students have passed in any of the two subjects only.

82. Find the total number of students who have passed in mathematics.

(1) 12 (2) 15 (3) 21 (4) 33

83. What is the difference in the number of students who have passed in physics and chemistry ?

(1) 8 (2) 7 (3) 6 (4) 5

84. Question below has three statements I, II and III. Decide whether the data in the statements is sufficient to find the answer to the given question:
Five children P, Q, R, S and T are sitting in a row.

Statements :

I. S is sitting next to the right of P.
II. Q is sitting next to R.
III. R is sitting to the extreme left.

Question : To find who is sitting next to Q,

(1) Data in statement I is sufficient.
(2) Data in statement II is sufficient.
(3) Data in all the statements I, II and III are sufficient.
(4) Data in all the statements I, II and III are not sufficient.

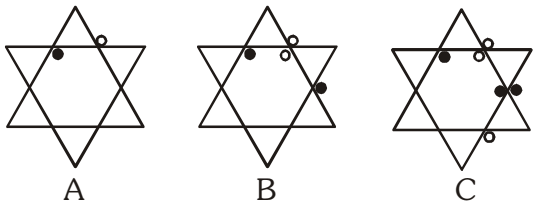
Directions (Q.85 to Q.87): Find the wrong number /letters/ figure in the given series.

85. 9, 33, 73, 127, 201, 289

(1) 201 (2) 127 (3) 73 (4) 33

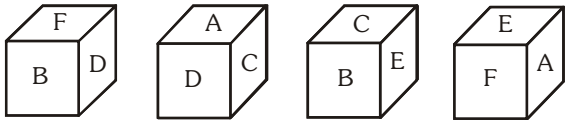
86. ACZX, BDYW, CEXV, DFVT, EHWU

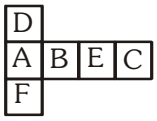
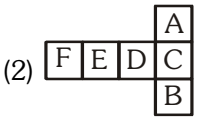
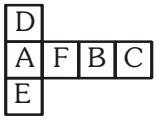
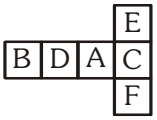
(1) B D Y W (2) C E X V
(3) E H W U (4) A C Z X

87. 
A B C D E F

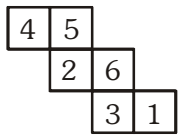
(1) D (2) C (3) F (4) E

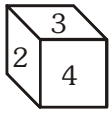
Directions (Q.88 & Q.89): Different faces of a cube are shown. Among the alternatives given identify which one of the figures represent the unfolded cube.

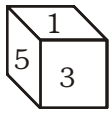
88. 

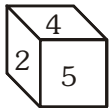
(1) 
(2) 
(3) 
(4) 

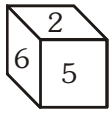
89. When the given problem figure is folded as a cube, identify which one of the cubes with faces shown below is NOT possible?



(1) 

(2) 

(3) 

(4) 

Directions (Q.90 & Q.91): Take the given statements as true and decide which of the conclusions logically follow from the statements.

90. Statements :

(1) All umbrellas are aeroplanes.

(2) Some birds are aeroplanes.

Conclusions :

I. All umbrellas are birds.

II. All aeroplanes are umbrellas.

(1) Only conclusion I follows.

(2) Only conclusion II follows.

(3) Both conclusion I and II follow.

(4) Neither conclusion I nor II follows.

91. Statements :

(1) Some teachers are students.

(2) All students are women.

Conclusions :

I All teachers are women.

II Some women are students.

III Some women are teachers.

IV All students are teachers.

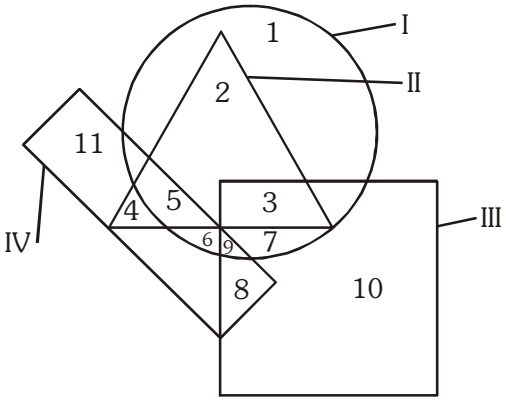
(1) Only conclusion I follows.

(2) Conclusions I, II and III follow.

(3) Conclusions II and III follow.

(4) Conclusions I, III and IV follow.

Directions (Q.92 & Q.93): The following questions are based on the given intersecting figures.



92. Which pair of numbers given below are inside any Two figures only ?

(1) 4, 8 (2) 1, 11 (3) 3, 10 (4) 5, 9

93. Which one of the following statements is correct ?

(1) Number 9 is in figures I, II, III

(2) Number 7 is in figures II, III, IV

(3) Number 6 is in figures I, III, IV

(4) Number 5 is in figures I, II, IV

Directions (Q.94 to Q.96): In column-I words are given. Their codes are given in small letters under column-II without following the same order as in column-I. The codes for each word are jumbled within and among the columns. Find the codes for the letters of words in column-I and find the codes for given words in the questions.

Column-I Words	Column-II Codes
P O T	c e k
M A P	i w a
B U T	k x i
D A M P	b c e p
R E A M	c e s k
O C C U P Y	x i i e x a
B O T T O M	k w x n n q

94. BOAT

(1) b a c i (2) a x c i (3) x c a k (4) c a b k

95. CANDY

(1) q c f n i (2) c n r q s

(3) n c z s q (4) b x t w n

96. P R U D E N T

(1) k p w s b z i (2) e i x k a f c

(3) w k x q i r b (4) k n a b e t q

97. A parallelogram is given below. Among the choices given, identify which set of parts of figure is required to form the parallelogram.

(1) A, B, C, E (2) A, F, E, D

(3) A, D, C, E (4) A, D, B, F

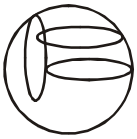
98. Anil is one-third of his father's age. After 5 years his father will be two and half times of Anil's age. Find the present age of Anil's father.

(1) 60 years (2) 45 years

(3) 42 years (4) 36 years

99. In the following questions two figures are given as problem figures. Find which of the following alternative figures would be formed, if the first figure is superimposed on the second figure.

Problem Figures :

a 

b 

(1) 

(2) 

(3) 

(4) 

100. One evening you will go to market with your friend. There you will notice a person looking suspicious and acting in a strange manner. At this situation what might your appropriate decision ?

(1) You will just alert your friend.

(2) You will leave the market and come out.

(3) You will call the police immediately.

(4) You will neglect that person.