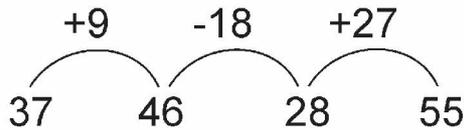


MENTAL APTITUDE TEST (MAT) PAPER : Maharashtra – 2016-17

Q. 1 and 2 – Directions : - In the following question a specific group is given. From the given alternatives, find out the right term which matches the given group.

1. 37, 46, 28
 (1) 56 (2) 55 (3) 54 (4) 83



2. 22TB, M23K, QR35
 (1) H22K (2) N290 (3) 35YZ (4) Q47X

2. BONUS

3. Alphabet series

x c w m v c x w m w m x c x w m x m

In the given alphabet series how many times m is succeeded by w and preceded by w?

- (1) 1 (2) 0 (3) 2 (4) 3

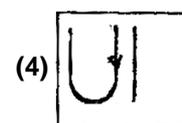
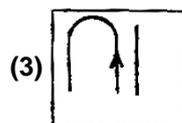
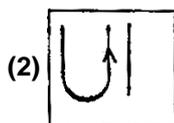
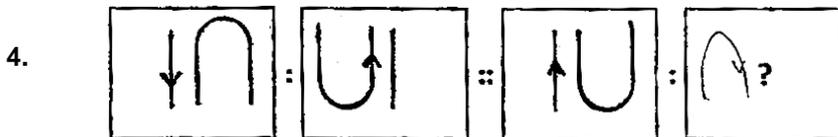
3. (1)

X C W M V C X W M W M X C X W M X M

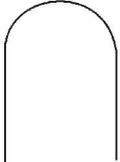
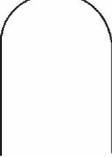
Pattern

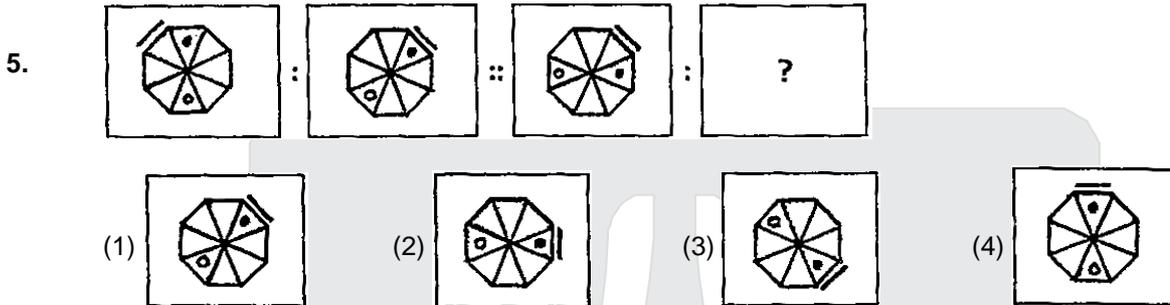
Should be → W M W

Q. 4 and 5 – Directions : - In the following questions there is a specific relationship between the first and second figure. The same relationship exists between the third and fourth figure which will replace the question mark. Select the correct term from the alternatives given.



4. (1)

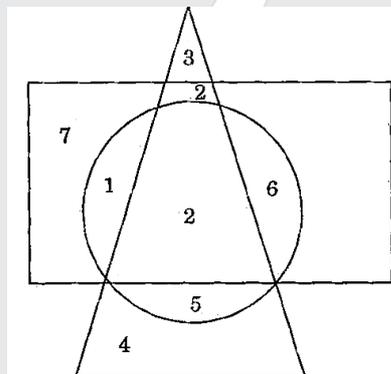

 is shifted to other side of | and get inverted and the arrow mark is shifted of  in reverse



5. (3)

Diagram is shifted 45° in clockwise direction and the line is shifted above dot.

Q. 6 and 7 – Directions: - In each of the following Venn diagram, rectangle represents no. of poets, triangle represents no. of novelists and circle represents no. of dramatists. Answer the following questions.



6. How many are novelists but not dramatists?

- (1) 7 (2) 9 (3) 8 (4) 3

6. (2)

Novelist but not dramatists person comes in triangle but not in circle

$$\Rightarrow 3 + 2 + 4 = 9$$

7. How many are dramatists but not poets?

- (1) 5 (2) 8 (3) 13 (4) 22

7. (1)

Dramatists but not poets person comes in circle but not in rectangle

$$\Rightarrow 5$$

Q. 8 and 9 – Directions : - Write which number in sequence replaces the question mark.

8. $11\frac{1}{9}, 12\frac{1}{2}, 14\frac{2}{7}, 16\frac{2}{3}, ?$

(1) $8\frac{1}{3}$

(2) $19\frac{1}{2}$

(3) 20

(4) $22\frac{1}{3}$

8. (3)

$11\frac{1}{9}, 12\frac{1}{2}, 14\frac{2}{7}, 16\frac{2}{3}, ?$

$\frac{100}{9}, \frac{25}{2} \times \frac{4}{4}, \frac{100}{7}, \frac{50}{3} \times \frac{2}{2}, ?$

Firstly make numerator same so series becomes

$\frac{100}{9}, \frac{100}{8}, \frac{100}{7}, \frac{100}{6}$

So next will be $\frac{100}{5} = 20$

9. 2, 9, 38, 155, ?

(1) 314

(2) 193

(3) 623

(4) 624

9. (4)

2, 9, 38, 155, ?

$2 \times 4 + 1 = 9$

$9 \times 4 + 2 = 38$

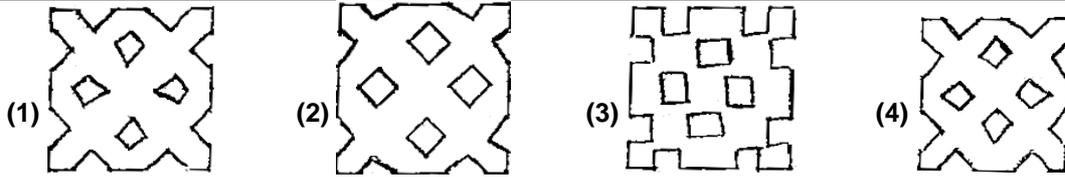
$38 \times 4 + 3 = 155$

$155 \times 4 + 4 = 624$

10. A square piece of paper is folded and cut at specific spot as shown in the figure. The paper when unfolded will look like as shown in one of the alternatives. Select the correct alternative.

Question Figure





10. (1)
By Diagram logic

11. Find the odd term.

(1) B4J (2) L5V (3) H2D (4) L1H

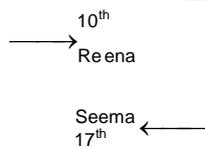
11. (4)

1.	B	4	J	⇒	$\left \frac{(10-2)}{2} \right = 4$
	2		10		
2.	L	5	V	⇒	$\left \frac{(22-12)}{2} \right = 5$
	12		22		
3.	H	2	D	⇒	$\left \frac{(4-8)}{2} \right = 2$
	8		4		
4.	L	1	H	⇒	$\left \frac{(8-12)}{2} \right = 2$ (Not Follows)
	12		8		

12. In a row girls Seema and Reema are ninth from right and tenth from left respectively. If they interchange their positions then Seema and Reema are seventeenth from right and eighteenth from left respectively. Find the total number of girls in the row.

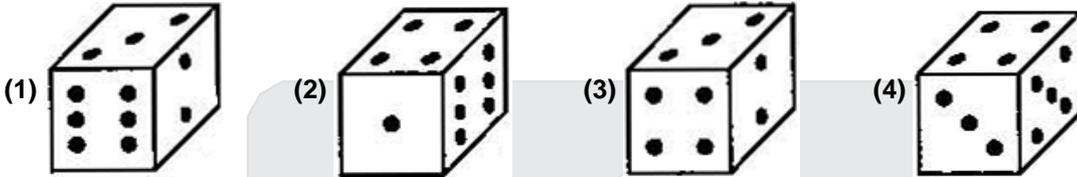
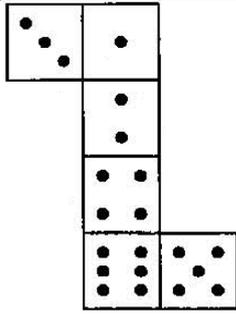
(1) 27 (2) 26 (3) 25 (4) 20

12. (2)



$$(10 + 17 - 1) = 26$$

13. The following figure is folded to form a cube. Observe the cube. Of the following cube figures find the most appropriate figure.



13. (3)
With the help of rotation logic

Q. 14 and 16 – Directions :- In each of the following questions there is a specific relationship between the first and second term. The same relationship exists between the third and fourth term which will replace the question mark. Select the correct term from the alternatives given.

14. BYXC : DWVE :: ? : HSRI
(1) FVSG (2) FTSG (3) FUTG (4) FTUG

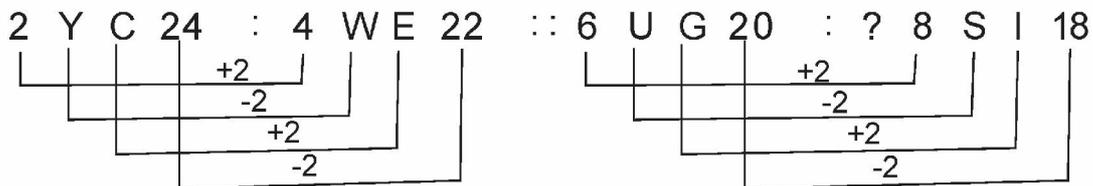
14. (3)

BY XC : 4W E22 :: 6U G20 : ?
 $\begin{matrix} 2 & 25 \\ \hline & 27 \end{matrix}$ $\begin{matrix} 24 & 3 \\ \hline & 27 \end{matrix}$ $\begin{matrix} 4 & W & E & 2 & 2 \\ \hline & 27 & & 27 & \end{matrix}$ $\begin{matrix} 6 & U & G & 2 & 0 \\ \hline & 27 & & 27 & \end{matrix}$:

F U T G
 $\begin{matrix} 6 & 21 \\ \hline & 27 \end{matrix}$ $\begin{matrix} 20 & 7 \\ \hline & 27 \end{matrix}$

15. 2YC24 : 4WE22 :: 6UG20 : ?
(1) 8SJ18 (2) 8SK18 (3) 8SI18 (4) 8RJ18

15. (3)



Q.16 and 17. – Directions : - Find the correct alternative which will replace the question mark.

21		5	28		13	16		2
	24			30			?	
17		7	25		7	10		8

- (1) 24 (2) 30 (3) 36 (4) 40

16. (2)

$$\frac{(21-17) \times (5+7)}{2} = 24$$

$$\frac{(28-25) \times (13+7)}{2} = 30$$

$$\therefore \frac{(16-10) \times (2+8)}{2} = 30$$

	5			21			51
16	109	2	22	53	19	17	? 48
	6			15			13

- (1) 25 (2) 37 (3) 98 (4) 129

17. (1)

$$(16-6)^2 + (5-2)^2 = 109$$

$$(22-15)^2 + (21-19)^2 = 53$$

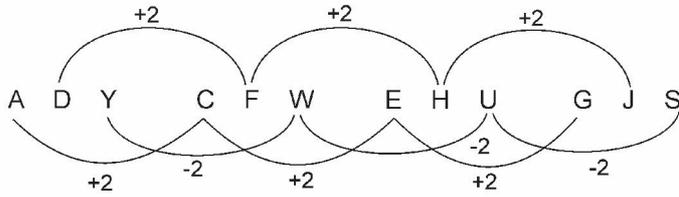
$$(17-13)^2 + (51-48)^2 = 25$$

Q.18 and 19. – Directions : - In each of the following questions write which number in sequence replaces the question mark.

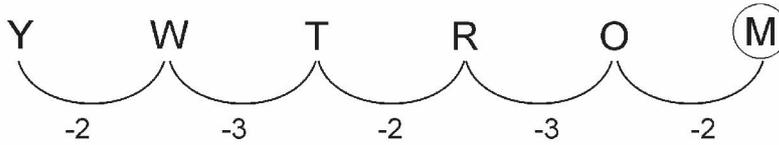
18. ADY, CFW, EHU, ?

- (1) GIH (2) FIT (3) GJR (4) GJS

18. (4)



19. Y, W, T, R, O, ?
 (1) L (2) P (3) K (4) M
19. (4)



Q. 20 and 21. – Directions : - Using alphabet A to Z in sections of figure I and II a code has been created. First letter in every section is coded according to its shape and the second letter is coded using a dot.

eg.— A is coded as \llcorner ; M is coded as $\llcorner \cdot$;

K is coded as \triangleright ; P is coded as $\triangleright \cdot$.

Figure I

AM	NF	LO
BU	TV	DG
EW	IZ	XY

Figure II

JC	HS
KP	RQ

20. What will be the code of SMILE?

- (1) $\llcorner \cdot$ \llcorner \square $\llcorner \cdot$ \lrcorner \lrcorner (2) \llcorner $\llcorner \cdot$ $\lrcorner \cdot$ \lrcorner \lrcorner \lrcorner
- (3) $\llcorner \cdot$ \llcorner \lrcorner \lrcorner \lrcorner \lrcorner (4) \llcorner \llcorner \lrcorner \lrcorner \lrcorner \lrcorner

20. (3)

Based on given Logic

21. What will be the code of BUKAR?

- (1) \square $\llcorner \cdot$ $\triangleright \cdot$ \lrcorner $\lrcorner \cdot$ (2) \square $\lrcorner \cdot$ \triangleright \lrcorner $\lrcorner \cdot$
- (3) \square $\square \cdot$ \triangleright $\llcorner \cdot$ $\lrcorner \cdot$ (4) \square \square \triangleright \lrcorner \lrcorner

21. (4)

Based on given Logic

22. If CH = X, then BJ = ?

- (1) T (2) R (3) V (4) L

22. (1)

$$\begin{array}{l} C \quad H = X \\ 3 \times 8 = 24 \end{array} \qquad \begin{array}{l} B \quad J = T \\ 2 \times 10 = 20 \end{array}$$

23. Kiran was born on 12th September this year. Soham is 12 days younger to Kiran. In the same month Hindi day was celebrated on Friday. What is the birthday of Soham?

- (1) Wednesday (2) Sunday (3) Saturday (4) Monday

23. (4)

Hindi Day : – 4 September-Friday

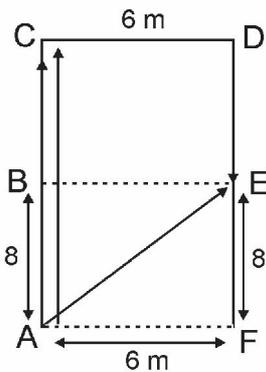
Kiran born on WENDESDAY

Soham born on MONDAY

24. A farmer travels 20 m north from his house. He then turns east and walks 6 m, from there he again turns south and walks 12 m. How far is he from his original position?

- (1) 6 meter (2) 8 meter (3) 10 meter (4) 14 meter

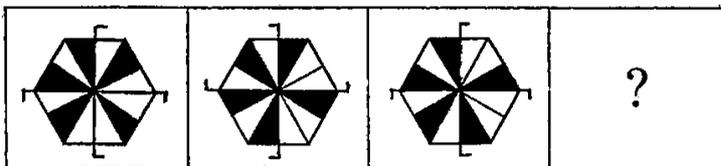
24. (3)

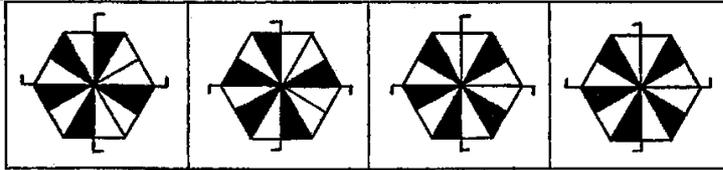


$$AE = \sqrt{6^2 + 8^2} = 10 \text{ M}$$

Q. 25 and 26 – Direction :- In each of the following, question figures change in a particular order. Find out the correct figure from the alternatives which will replace the question mark?

25.



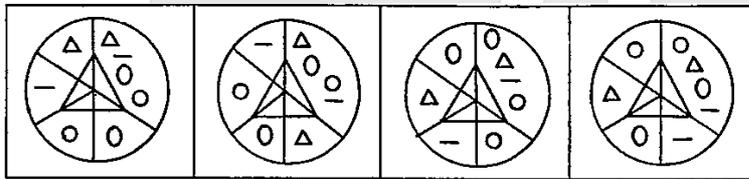
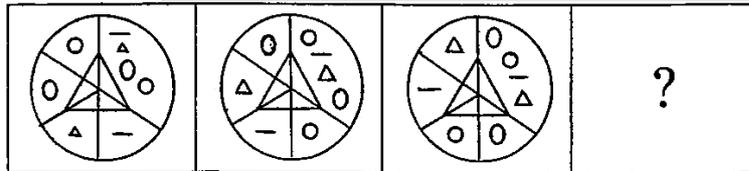


(1) (2) (3) (4)

25. (4)

Based on Anticlockwise logic

26.



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

26. (2)

Based on Picture Logic

Q.27 and 28 – Directions :- In the following questions there is a specific relationship between the first and second term. The same relationship exists between the third and the fourth term. Finding the relationship select the correct term from the alternatives given.

27. $4 : 48 :: ? : 100$

(1) 7 (2) 5 (3) 6 (4) 10

27. (2)

$4 : 48 :: 5 : 100$

\downarrow
 $4 \times 3 \times 4$

\downarrow
 $5 \times 4 \times 5$

28. $45 : 54 : 46 : ?$

(1) 83 (2) 72 (3) 68 (4) 58

28. (1)

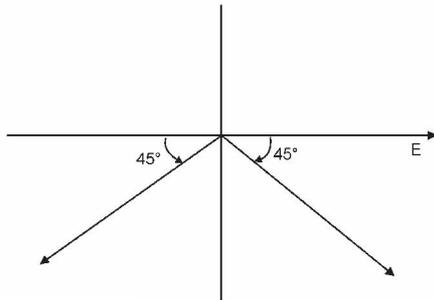
$45 : 54 :: 46 : 83$

$4 \times 5 = 20$ $5 \times 4 = 20$ $4 \times 6 = 24$ $8 \times 3 = 24$

29. If a man facing east rotates in clockwise direction through 45° and later in anticlockwise through 270° , then which direction is he facing ?

- (1) south – east (2) west (3) south – west (4) South

29. (3)



Q.30 and 31 – Directions :- Find the odd term

30. (1) 749 (2) 694 (3) 568 (4) 487

30. (1)

$$7 + 4 + 9 = 20$$

$$6 + 9 + 4 = 19$$

$$5 + 6 + 8 = 19$$

$$4 + 8 + 7 = 19$$

31. (1) 4321 (2) 3212 (4) 2116 (4) 6211

31. (2)

$$4321$$

$$3212$$

$$2116$$

$$6211$$

$$4 + 3 + 2 + 1 \quad \text{odd}$$

$$= 2 + 1 + 1 + 6$$

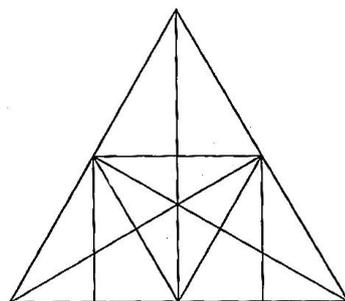
$$= 2 + 1 + 1 + 6$$

$$= 10$$

$$= 10$$

$$= 10$$

32. Direction:- Observe the figure and the number of isoscales triangles which are not equilateral.

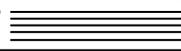


(1) 6

(2) 8

(3) 10

(4) 12



32. (4)

Q.33 and 34 – Directions :- Answer the following questions bases on the information given below.

- (1) Bhanudas, Gopal, Amar, Akhil and Cgaitanay each pratice one of the professions farming, Laywer, Doctor, Teacher, Photographer.
- (2) Akhil who is richer than Amar and Chaitanay is laywers.
- (3) Farmer is the richest of all.
- (4) occupation of the poorest is photography.
- (5) Amar is a doctor and Gopal is a photographer.
- (6) Akhil is more richer than Amar but lesser richer than Bhanudas.

Then

33. What is occupation of Chaitanya ?

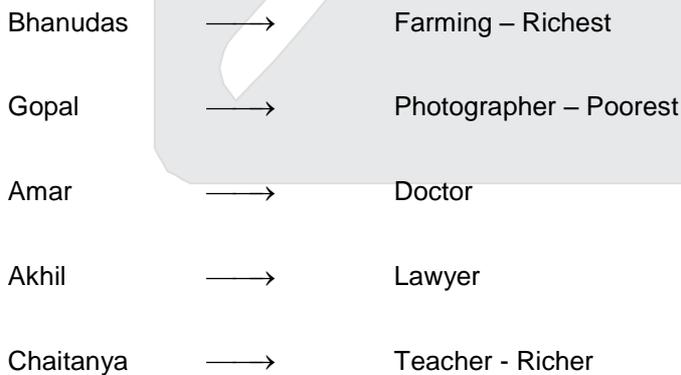
- (1) Lawyer
- (2) Doctor
- (3) Farmer
- (4) Teacher

34. Who among the following is farmer ?

- (1) Akhil
- (2) Bhanudas
- (3) Gopal
- (4) Chaitanya

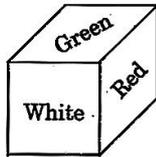
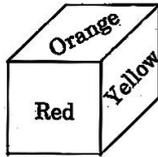
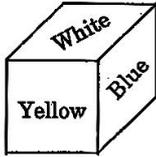
33. (4)

34. (2)



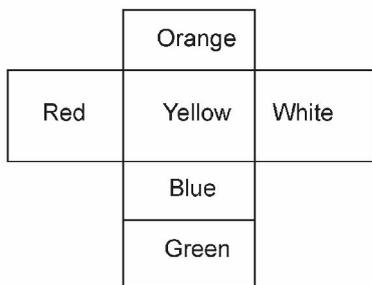
Q.35 and 36

Direction :- Three positions of a cube are shown in figure. Observe the colours and answer the following questions.



35. Which colour's surface is opposite to red coloured surface ?:
- (1) Blue (2) Orange (3) Yellow (4) White
36. Which coloured surface is opposite to yellow coloured surface ?
- (1) White (2) Red (3) Orange (4) Green

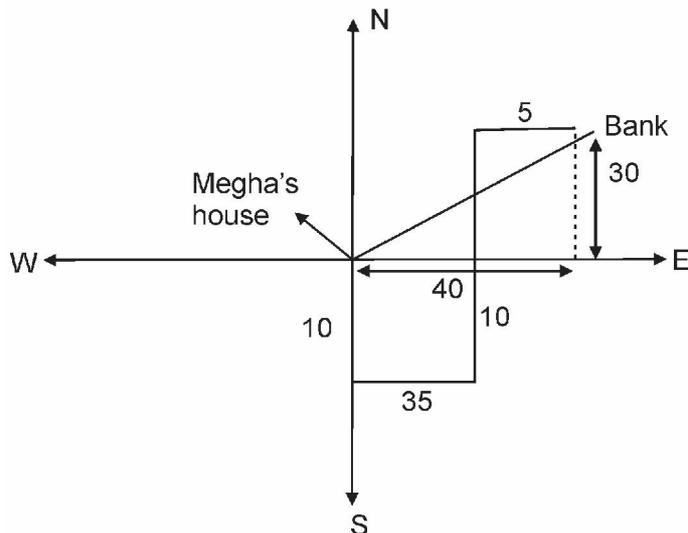
35-36.



35. (4) 36. (4)

37. Meghana travels 10 km towards south, then turns left and travels 35 km, again runs left and travels 40 km, then she turns right and travels 5 km and reaches her workplace to the bank. What is the distance between Meghana's house and bank ?
- (1) 50 km (2) 39 km (3) 40 km (4) 30 km

37. (1)



By Pythagoras distance between house & bank = 50 km

38. A rhythmic arrangement of alphabets is given. The mission letter alphabets appears in the same order as in one the alternative answers. Find the correction alternative

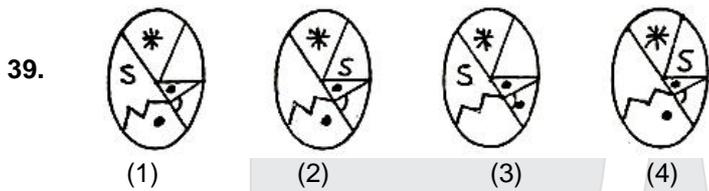
– b c d b c – d c a b d – b c d b c – d c – b d

- (1) aaaaa (2) bbbbb (3) ccccc (4) ddddd

38. (1)

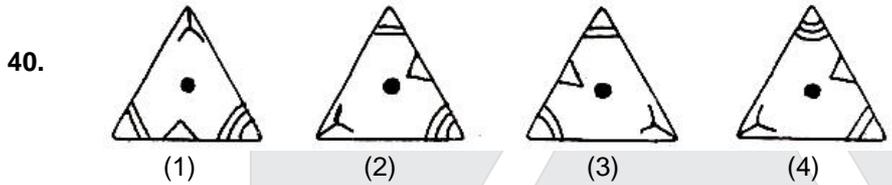
By letter Logic

Q.39 and 40 – Direction :- Find the odd figure.

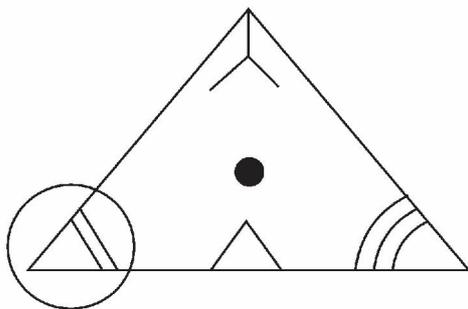


39. (3)

By diagram Logic

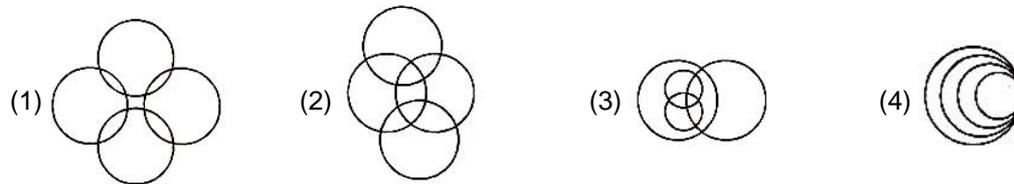


40. (3)



In all other three examples this is to the left of triangle

41. Some students of a village school stay in the village itself. Some students come form neighboring villages. Some students study in English medium, while some study in Marathi medium. Of the following figures which figure represents the above information ?



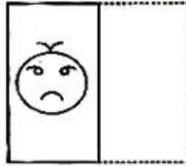
41. (1)

By diagram Logic

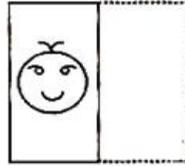
42. Direction:- In the figure given below, a transparent square shaped paper is folded along the dotted lines. What figure is obtained ? Find the figure from the alternative figure given.



(1)



(2)



(3)



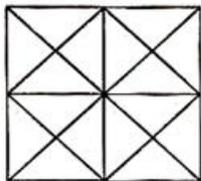
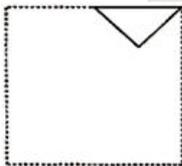
(4)

42. (2)

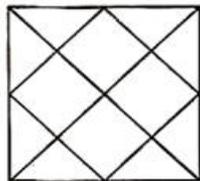
By diagram Logic

43. A folded piece of square paper is shown as question figure. The paper is unfolded. How will it look is shown in the alternatives. Select the correct alternative

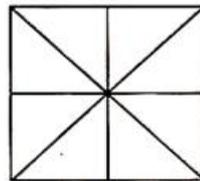
Question figure



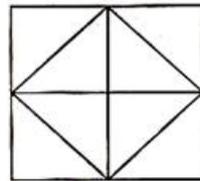
(1)



(2)



(3)



(4)

43. (1)

By diagram Logic

44. In the following question, there is a specific relationship between the numbers inside the bracket and outside the bracket in each row. Find the relation and select the correction alternative to replace the question mark.

$$3(45)6$$

$$7(70)4$$

$$5(?)8$$

(1) 84

(2) 78

(3) 94

(4) 100

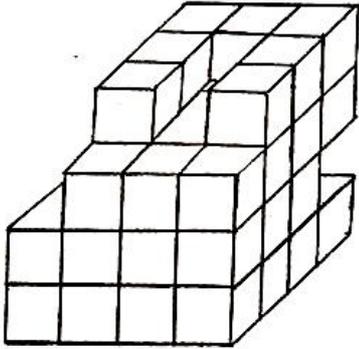
44. (4)

$$3(45)6 \quad 3 \times 6 = 18 \times 5 = \frac{90}{2} = 45$$

$$7(70)4 \quad 7 \times 4 = 28 \times 5 = \frac{140}{2} = 70$$

$$5(?)8 \quad 5 \times 8 = 40 \times 5 = \frac{200}{2} = 100$$

Q.45 and 46 – Direction :- In the following figure small cubes are arranged in a particular manner as shown. Observe the arrangement and answer the following questions.



45. What is the total number of small cubes ?
 (1) 52 (2) 49 (3) 47 (4) 45

45. (3)

By diagram Logic

46. What is the total number of blocks whose three surfaces are seen ?
 (1) 12 (2) 13 (3) 14 (4) 15

46. (1)

By diagram Logic

Q. 47 and 48 – Direction :- Two tables are given below in which two group of alphabets are written. In table I the rows and columns are numbers 0-4 and in table II the rows and columns are numbered 5-9. The alphabets in the tables are represented first by their row number and then by their column number.

Eg. R is represented as R = 10, 42

Table I

	0	1	2	3	4
0	A	R	V	N	D
1	R	N	D	V	A
2	D	V	N	A	R
3	N	D	A	R	V
4	V	A	R	D	N

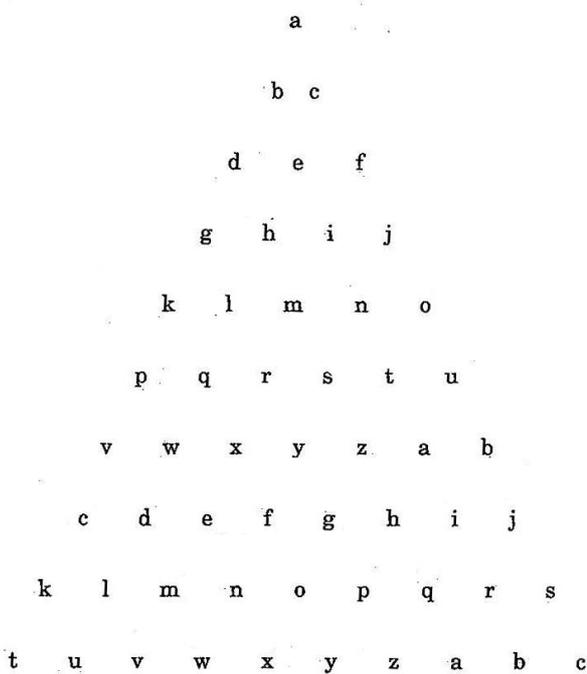
Table II

	5	6	7	8	9
5	K	I	L	E	T
6	E	T	K	I	L
7	L	K	E	T	I
8	T	L	I	K	E
9	I	E	T	L	K

47. Which group of number represented LEAD ?
 (1) 57, 65, 00, 12 (2) 75, 96, 31, 43 (3) 98, 69, 23, 14 (4) 86, 77, 41, 40
47. (1)
 By diagram Logic

48. Which group of numbers represents RINK ?
 (1) 42, 79, 30, 78 (2) 10, 68, 43, 55 (3) 24, 87, 11, 89 (4) 01, 95, 22, 67
48. (4)
 By diagram Logic

Q.49 and 50 – Directions :- Observe the pyramid of alphabets. Answer the following.



49. dheb, kqlg, cluk ?
 (1) gihd (2) kqwp (3) pldv (4) vdic
49. (3)
 By diagram Logic
50. bhr : cis :: rxem : ?
 (1) jnsy (2) szhq (3) dhms (4) giry
50. (2)
 By diagram Logic

