

**MAHARASHTRA
NATIONAL TALENT SEARCH EXAMINATION 2016- 17**

Mental Ability(MAT)

Each question has four choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

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

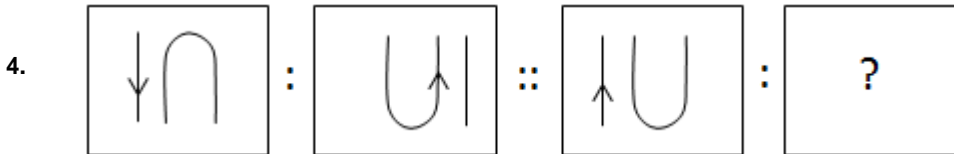
1. 37, 46, 28
 (1) 56 (3) 54
 (2) 54 (4) 83
 (3) 54
2. 22TB, M23K, QR35
 (1) H22K (2) N29O
 (3) 35YZ (4) Q47X
3. Alphabet series

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

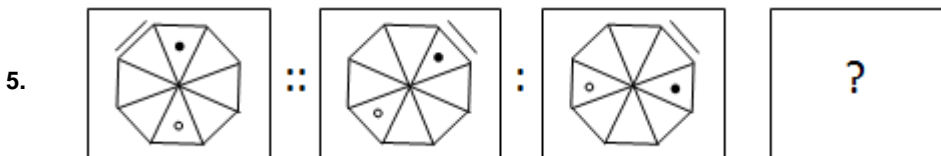
In the given alphabet series how many times m is succeeded by w and preceded by w?

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

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.

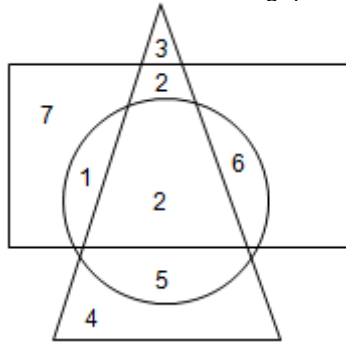


- (1)  (2) 
- (3)  (4) 



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

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

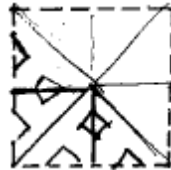


6. How many are novelists but not dramatists?
 (1) 7 (2) 9
 (3) 8 (4) 3
7. How many are dramatists but not poets?
 (1) 5 (2) 8
 (3) 13 (4) 22

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) $22\frac{1}{3}$
9. 2, 9, 38, 155 ?
 (1) 314 (2) 193
 (3) 623 (4) 624

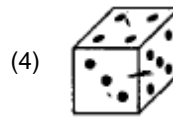
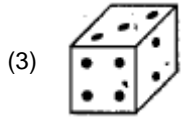
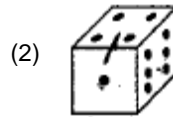
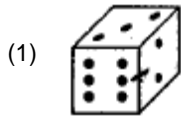
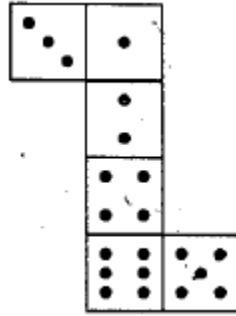
10. A square piece of paper is folded and cut at specific spot as shown in the figure. The paper when unfolded will look like as shown in one of the alternatives. Select the correct alternative.



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

11. Find the odd term.
 (1) B4J (2) L5V
 (3) H2D (3) L1H
12. In a row of 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

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



Q. 14. and 15. 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, : MATZ : I:ISRI

- (1) FVSG
(3) FUTG

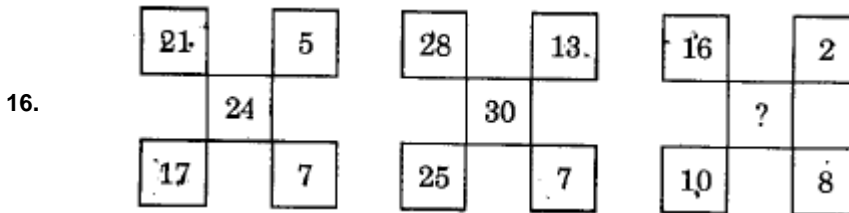
- (2) FTSG
(4) FTUG

15. 2Y024 : 4WE22 :: 6UG20. : ?

- (1) 8SJ18
(3) 8SI18

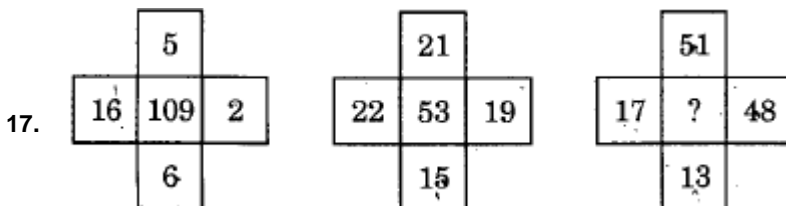
- (2) 8SK18
(4) 8RJ18

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



- (1) 24
(3) 36

- (2) 30
(4) 40



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
(3) GJR

- (2) FIT
(4) GJS

19. Y, W, T, R, O, ?

- (1) L
(3) K

- (2) P
(4) M

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  ; M is coded as  ;
 K is coded as  ; P is coded as  .

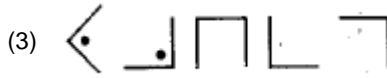
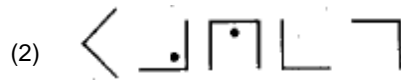
Figure I

AM	NF	LO
BU	TV	DG
EW	IZ	XY

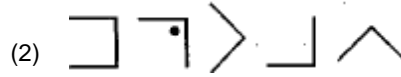
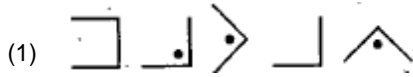
Figure II

JC	
KP	HS
RQ	

20. What will be the code of SMILE?



21. What will be the code of EUKAR?



22. If CH = X , then BJ = ?

- (A) T
(C) V

- (B) R
(D) L

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?

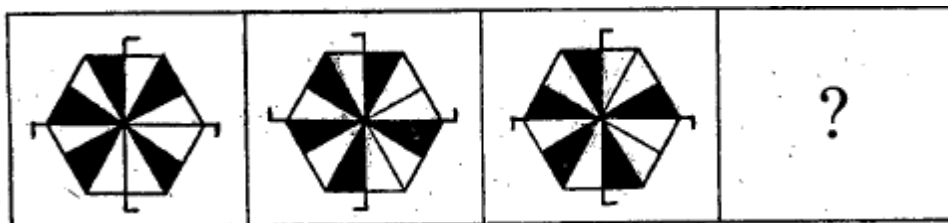
- (1) Wednesday (2) Sunday
(3) Saturday (4) Monday

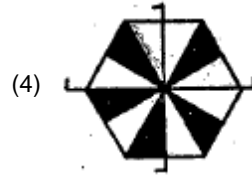
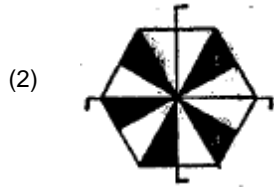
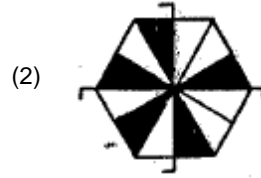
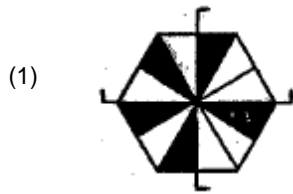
24. A farmer travels 20 m north from his house. He then turns east and walks 6 m, from there he again turns south and walks 12 m. How far is he from his original position?

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

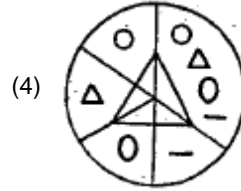
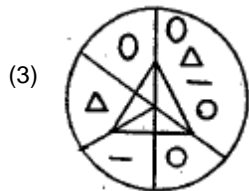
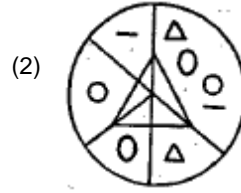
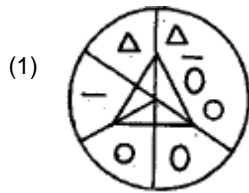
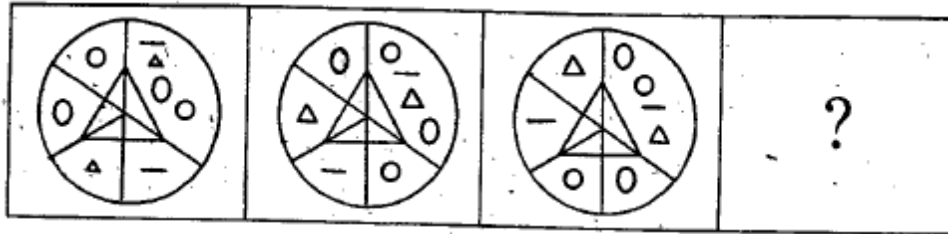
Q. 25 and 26. Directions:- In each of the following, question figures change in a particular order. Find out the correct figure from the alternatives which will replace the question mark?

25.





26.



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
(3) 6

- (2) 5
(4) 10

28. $45 : 54 :: 46 : ?$

- (1) 83
(3) 68

- (2) 72
(4) 58

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

- (1) South-East
(3) South-west

- (2) West
(4) South

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

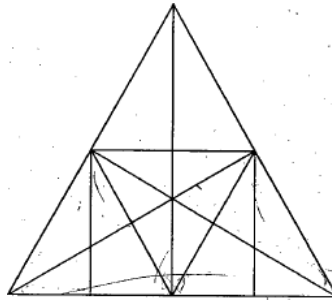
30. (1) 749
(3) 568

(2) 694
(4) 487

31. (1) 4321
(3) 2116

(2) 3212
(4) 6211

32. Directions: Observe the figure and the number of isosceles triangles which are not equilateral.

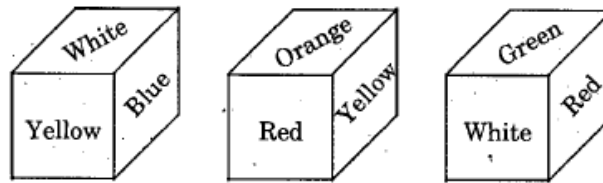


- | | |
|--------|--------|
| (1) 6 | (2) 8 |
| (3) 10 | (4) 12 |

Q. 33 and 34 Directions: Answer the following questions based on the information given below : (1) Bhanudas, Gopal, Amar, Akhil and Chaitanya each practice one of the professions farming, Lawyer, Doctor, Teacher, • Photographer. (2) Akhil who is richer than Amar and Chaitanya is a lawyer. (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 less richer than Bhanudas. Then:

33. What is the occupation of Chaitanya?
 (1) Lawyer (2) Doctor
 (3) Farmer (4) Teacher
34. Who among the following is farmer ?
 (1) Alchil (2) Bhanudas
 (3) Gopal (4) Chaitanya

Q. 35 and 36 Directions:- Three positions of a cube are shown in figure. Observe the colours and answer the following questions.

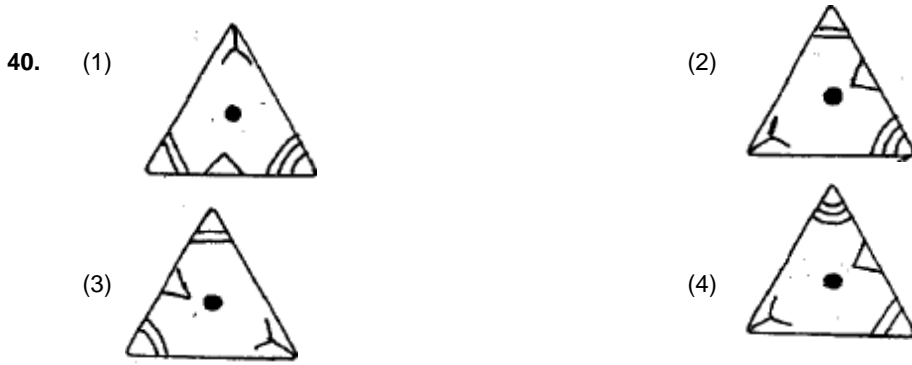


35. Which coloured surface is opposite to red coloured surface?
 (1) Blue (2) Orange
 (3) Yellow (4) White
36. Which coloured surface is opposite to yellow coloured surface?
 (1) White (2) Red
 (3) Orange (4) Green
37. Meghana travels 10 km towards south, then turns left and travels 35 km, again turns 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 ?
 (A) 50 km (B) 39 km
 (C) 40 km (D) 30 km
38. A rhythmic arrangement of alphabets is given. The missing letter alphabets appear in the same order as in one of the alternative answers. Find the correct alternative.
 —bcd—deabd—bcd—dc—b

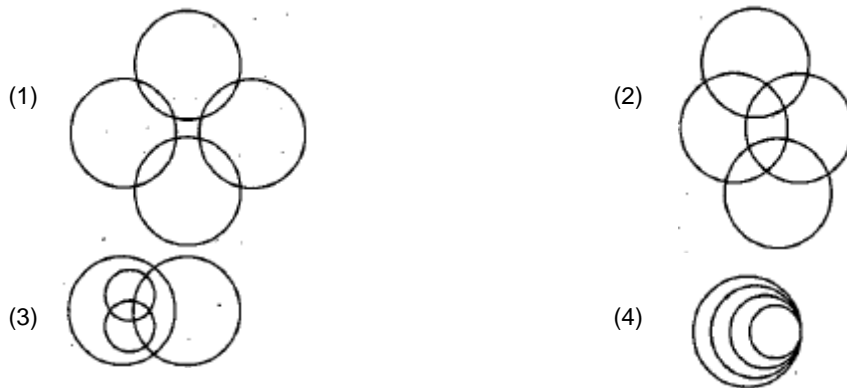
Q. 39 and 40 Directions: Find the odd figure.

39.

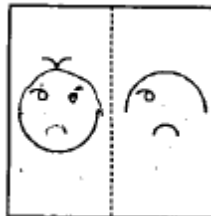




41. Some students of a village school stay in the village itself. Some students come from neighbouring villages. Some students study in English medium, while some study in Marathi medium. Of the following figures which figure represents the above information?

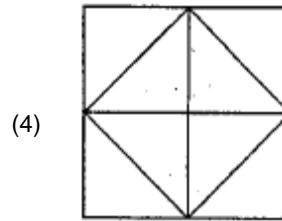
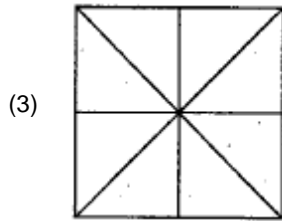
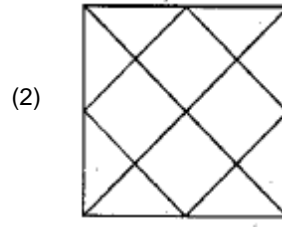
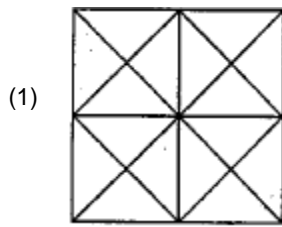


42. Directions In the figure given below, a transparent square shaped paper is folded along the dotted lines. What figure is obtained ? Find the figure from the alternative figures given.



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.





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 correct alternative to replace the question mark

3(45)6

7(70)4

5(?)8

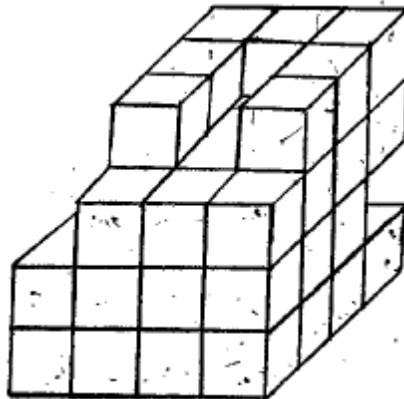
(1) 84

(2) 78

(C) 94

(D) 100

Q. 45 and 46 Directions: 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

46. What is the total number of blocks whose three surfaces are seen ?

(1) 12

(2) 13

(3) 14

(4) 15

Q. 47 and 48 Directions: Two tables are given below in which two groups of alphabets are written. In table I the rows and columns are numbered 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

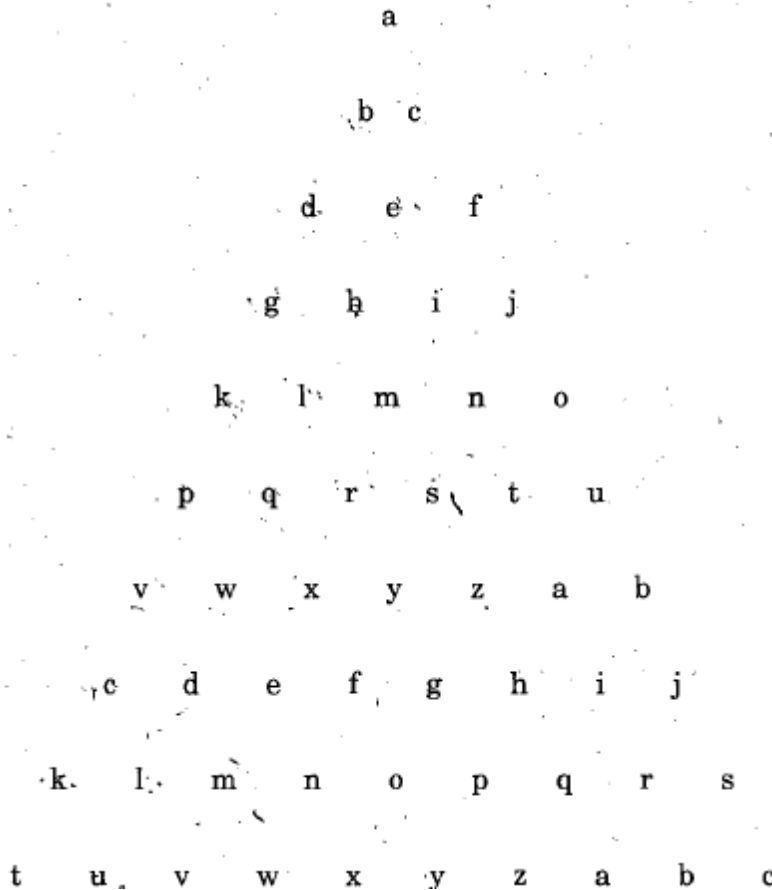
	0	1	2	3	4
0	A	R	V	N	D
1	R	N	D	V	A
2	D	V	N	A	R
3	N	D	A	R	V
4	V	A	R	D	N

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 numbers represents LEAD ?
 (1) 57, 65, 00, 12
 (2) 75, 96, 31, 43
 (3) 98, 69, 23, 14
 (4) 86, 77, 41, 40
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

Q. 49 and 50: Directions observe the pyramid of alphabets. Answer the following questions.



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