

# NATIONAL TALENT SEARCH EXAMINATION (FIRST LEVEL) 2016

## MENTAL ABILITY TEST ( For Students of Class X )

Date : 08/11/2015

Time : 45 Minutes

Max. Marks : 50

(For Blind Candidates Time : 60 Minutes)

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### INSTRUCTIONS TO CANDIDATES

**Read the following instructions carefully before you open question booklet.**

1. Answers are to be given on a **separate answer sheet (OMR sheet.)**
2. Please write your **Roll Number** as allotted to you in the admission card very clearly on **the test-booklet** and darken the appropriate circles on the **answer sheet** as per instructions given.
3. There are 50 questions in this test. All are compulsory.
4. Please follow the instructions given on the answer sheet for marking the answers.
5. If you do not know the answer to any question, do not waste 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 attempt them.
6. Since the time allotted for this question paper is very limited, you should make the best use of it by not spending too much time on any one question.
7. **Rough work** can be done **on the given Blank Pages at the back of the booklet** but not on the answer sheet/loose paper.
8. Every correct answer will be awarded one mark. There will be no negative marking.
9. **Please return the Answer sheet (OMR) only to the invigilator after the test.**
10. Hindi version of the question paper will be considered as final in case of any dispute arising out of variation in translated version.



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**Direction (1 – 4) :** In each of the questions 1 to 4 some of the letters are missing in the given series with one term missing shown by question mark (?). This term is one of the alternatives among the four groups of letters given under it. Find the right alternative.

1. Z, W, S, ?.

- (1) P (2) O (3) N (4) Q

Ans. (3)

2. AN, CP, FS, ?.

- (1) IV (2) JW (3) KX (4) LY

Ans. (2)

3. MYZ, LWX, ?, JST.

- (1) KUV (2) IQR (3) HOP (4) GMN

Ans. (1)

4. bdf, hjl, ?, tvx.

- (1) npr (2) pnr (3) nqr (4) npr

Ans. (1)

**Direction (5 – 8) :** In each of the questions 5 to 8 some of the numbers are missing in the given series with one term missing shown by question mark (?). This term is one of the alternatives among the four numbers given under it. Find the right alternative.

5. 8, 27, 64, ?, 216, 343.

- (1) 125 (2) 81 (3) 100 (4) 196

Ans. (1)

6. 5, 11, 19, ?, 41.

- (1) 28 (2) 29 (3) 30 (4) 35

Ans. (2)

7. 120, ?, 24, 6, 0.

- (1) 100 (2) 70 (3) 60 (4) 20

Ans. (3)

8.  $729, 81, 9, 1, \frac{1}{9}, ?, \frac{1}{729}$ .

- (1)  $\frac{1}{27}$  (2)  $\frac{1}{81}$  (3)  $\frac{1}{243}$  (4)  $\frac{1}{486}$

Ans. (2)

**Direction (9 – 11) :** In each of the questions below are given two statements and two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements.

9. **Statements :**

- (i) : All pencils are pens.  
(ii) : All pens are markers.

**Conclusions :**

- (I) : All pencils are markers.  
(II) : Some pens are pencils.

- (1) Only conclusion I is true (2) Only conclusion II is true  
(3) Both conclusions I and II are true (4) Neither conclusion I nor conclusion II is true.

Ans. (3)

10. **Statements :**

(i) : Some players are singers.

(ii) : All singers are tall.

**Conclusions :**

(I) : Some players are tall.

(II) : All players are tall.

(1) Only conclusion I is true

(2) Only conclusion II is true

(3) Both conclusions I and II are true

(4) Neither conclusion I nor conclusion II is true.

Ans. (1)

11. **Statements :**

(i) : All stones are diamond.

(ii) : Some diamonds are pearl.

**Conclusions :**

(I) : Some pearls are stone.

(II) : All diamonds are pearl.

(1) Only conclusion I is true

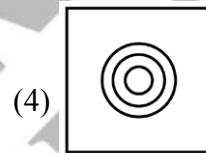
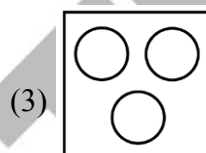
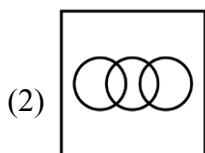
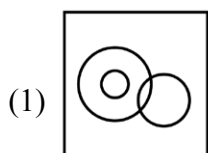
(2) Only conclusion II is true

(3) Both conclusions I and II are true

(4) Neither conclusion I nor conclusion II is true.

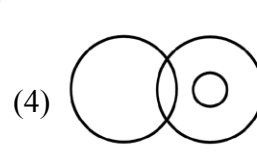
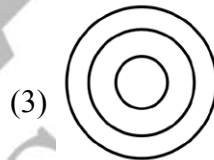
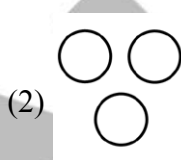
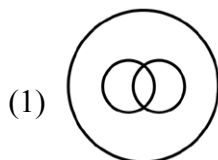
Ans. (4)

12. Which of the following Venn diagrams correctly represents intelligence, ability and honesty ?



Ans. (3)

13. Which of the following Venn diagrams correctly represents Delhi, India and Asia ?



Ans. (3)

**Direction (14 – 15) :** Give answer on the following Venn diagram :



14. How many persons are related to all three ?

(1) 20

(2) 12

(3) 32

(4) 17

Ans. (1)

15. How many persons are related to any two ?

(1) 32

(2) 34

(3) 43

(4) 27

Ans. (2)

**Direction (16 – 19) :** In questions 16 to 19 three alternatives are alike in a certain way but the rest one is different. Find out the odd one and write correct answer.

16. (1) ABNO

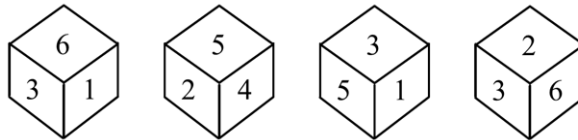
(2) CDPQ

(3) EFRS

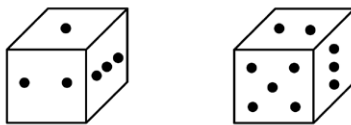
(4) GHUT

Ans. (4)

17. (1) 144, 12 (2) 121, 11 (3) 80, 9 (4) 100, 10  
 Ans. (3)
18. (1) Pen (2) Pencil (3) Chalk (4) Blackboard  
 Ans. (4)
19. (1) Haryana (2) Gujarat (3) Rajasthan (4) Shimla  
 Ans. (4)
20. In the given dice the opposite side of the 3 face is having which number ?



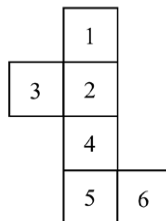
- (1) 2 (2) 3 (3) 4 (4) 6  
 Ans. (3)
21. In the given two positions of a dice, when 2 is below the dice which number is on the dice ?



- (1) 3 (2) 5 (3) 1 (4) 6  
 Ans. (4)

**Direction (22 – 23) :** Answer the questions on the basis of cube :

22. A cube of side 6 cm is divided in the cubes of side 2 cm. Then the total number of cubes is –  
 (1) 9 (2) 27 (3) 81 (4) 216  
 Ans. (2)
23. In the given figure of cube which is opposite face of 3 ?



- (1) 1 (2) 4 (3) 5 (4) 6  
 Ans. (4)
24. If in a coded language the word 'REKHA' is written as 'AHKER' then in the same code language 'HEMA' will be written as –  
 (1) AMEH (2) EMAH (3) MAHE (4) EAMH  
 Ans. (1)
25. If in a coded language the word CHILDREN is written as EJKNFTGP then TEACHER will be written as –  
 (1) VGCEJTG (2) VGCEJGT (3) VGCJEGT (4) VGCGEJT  
 Ans. (2)
26. In a coded language the given alphabets are written in special codes.
- | A | B | C | D | E | S | U | V | M | N |
|---|---|---|---|---|---|---|---|---|---|
| 7 | 9 | 1 | 3 | 4 | 2 | 0 | 6 | 5 | 8 |
- Then code 973578 will be –  
 (1) BADMAN (2) BACMAN (3) DUEMAN (4) MANSDE  
 Ans. (1)

27. In a coded language 'RUSTY' is written as 96872. Then in the same coded language 'ZXWV' will be written as –

- (1) 1354 (2) 1543 (3) 1345 (4) 1534

Ans. (3)

28. A is uncle of B, B is daughter of C, C is the wife of D's son. Then how is A related to D ?

- (1) Son (2) Brother (3) Father (4) Maternal uncle

Ans. (1)

29. Ram travels 8 km to south, then moves to right and travels 6 km and at the end he again moves right and travels 8 km. Then the distance of Ram from initial point is.

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

Ans. (1)

30. If the meaning of  $\Delta$  is '+',  $\theta$  is ' $\times$ ',  $\square$  is ' $\div$ ' and  $\phi$  is ' $-$ ', then the value of  $24 \square 6 \Delta 5 \theta 6 \phi 14$  is –

- (1) 34 (2) 20 (3) 14 (4) 2

Ans. (2)

**Direction (31 – 34) :** In questions 31 to 34 there are two sets of figures, one set contains problem figures while the other has answer-figures. There is a sequence according to which the problem figures are arranged. You have to select an answer-figure which can be added in sequence in the problem-figures. Choose the correct figure.

31. **Problem-figures**

$\triangle$	$\triangle \square$	$\triangle \square \circ$	$\triangle \square \circ -$	$\triangle \square \circ - +$
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(A) (B) (C) (D) (E)

**Answer-figures**

$\triangle \square \circ$ $\times -$	$\square \triangle \circ$ $\times +$	$\times \triangle \square$ $\circ -$	$\triangle \square \circ$ $\times +$
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(1) (2) (3) (4)

Ans. (4)

32. **Problem-figures**

$\times \bullet$	$\bullet \times$	$\times \bullet \uparrow$	$\uparrow \bullet \times$	$\times \bullet \uparrow \uparrow$
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(A) (B) (C) (D) (E)

**Answer-figures**

$\uparrow \uparrow \bullet \times$	$\uparrow \uparrow \bullet \times$	$\uparrow \times \bullet \uparrow$	$\uparrow \uparrow \bullet \times \uparrow$
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(1) (2) (3) (4)

Ans. (1)

33. **Problem-figures**

$\triangle$	$\blacktriangle$	$\bigcirc$	?
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(A) (B) (C) (D)

**Answer-figures**

$\bigcirc$	$\bullet$	$\bigcirc$	$\bullet$
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(1) (2) (3) (4)

Ans. (4)

34. **Problem-figures**

$\bigcirc$	$\bullet$	?	$\bigcirc$
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(A) (B) (C) (D)

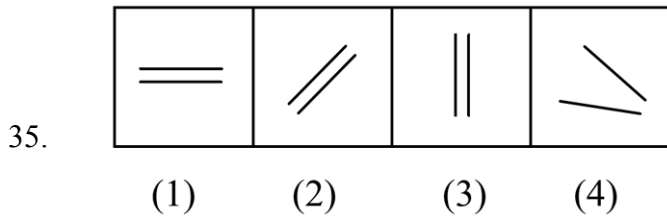
**Answer-figures**

$\bigcirc$	$\bullet$	$\bullet$	$\bullet$
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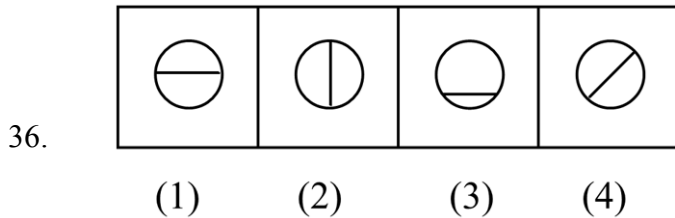
(1) (2) (3) (4)

Ans. (3)

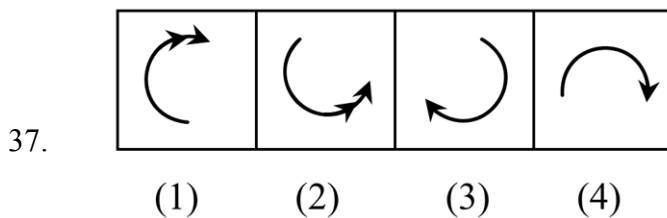
**Direction (35 – 37) :** In questions 35 to 37 there are four figures given. One of these does not correlate with the rest of the figures. Find out that odd figure.



Ans. (4)

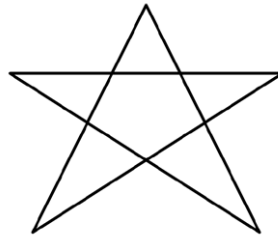


Ans. (3)



Ans. (2)

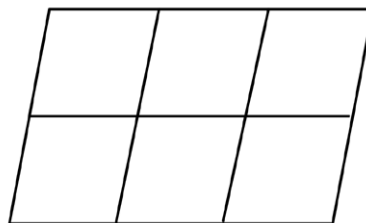
38. How many triangles are there in the figure below ?



(1) 5 (2) 6 (3) 8 (4) 10

Ans. (4)

39. How many parallelograms are there in the figure below ?



(1) 14 (2) 15 (3) 16 (4) 18

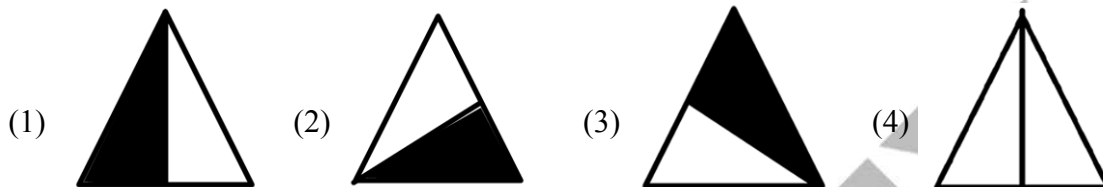
Ans. (4)

**Direction (40 – 42) :** In questions 40 to 42 find the correct mirror image of the given figure.

40. Question-figure



Answer-figures

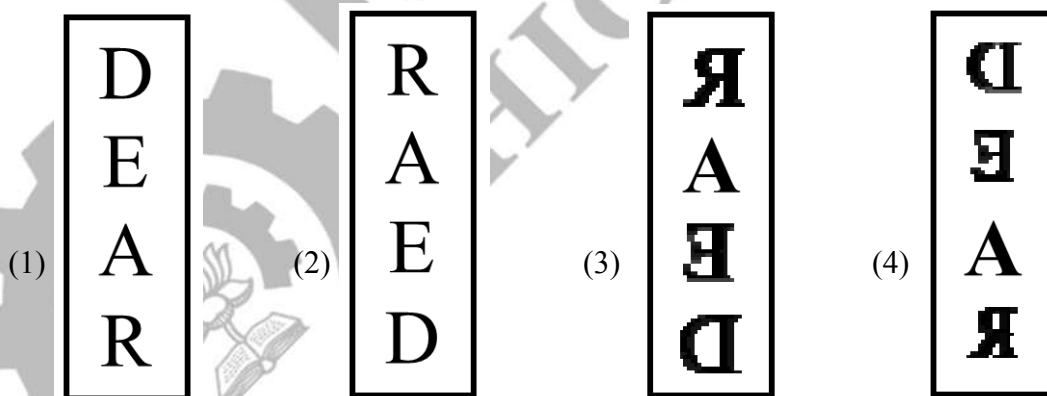


Ans. (1)

41. Question-figure

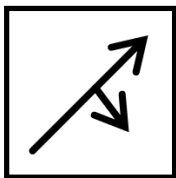


Answer-figures

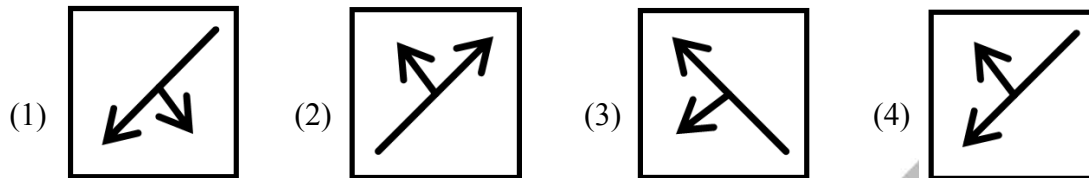


Ans. (4)

42. Question-figure



Answer-figures



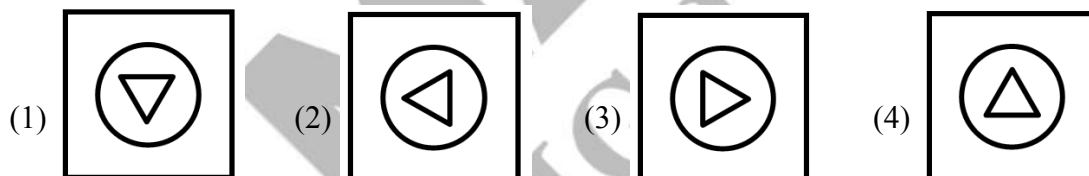
Ans. (3)

43. The water image of the given figure is –



Ans. (4)

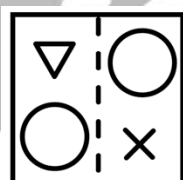
44. The water image of the given figure is



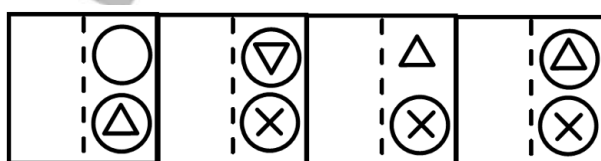
Ans. (1)

**Direction (45 – 46) :** In the following Questions 45 – 46, figures showing a sequence of folding a paper are given. Which could resemble the figure in the Answer-figure ?

45. Question-figures



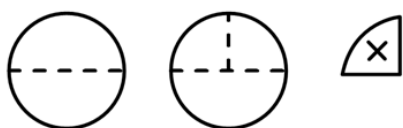
Answer-figures



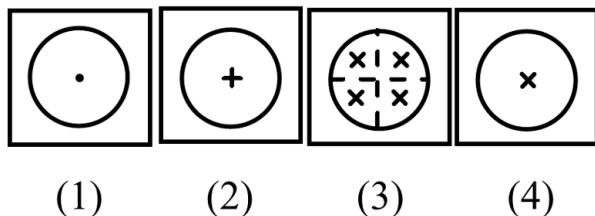
(1) (2) (3) (4)

Ans. (2)

46. Question-figure

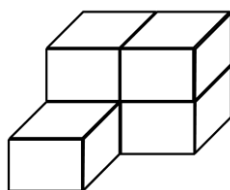


Answer-figures



Ans. (3)

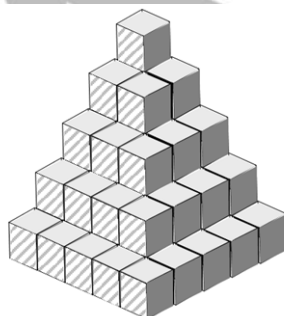
47. Find the number of blocks when the given stack of blocks is separated :



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

Ans. (3)

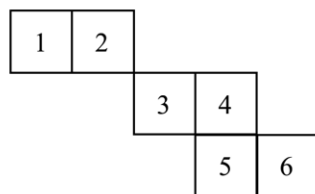
48. In the given figure, the total number of cubes is



(1) 25 (2) 55 (3) 85 (4) 35

Ans. (2)

49. In the given figure squares are folded and a cube is formed. Then the number opposite to 2 is –



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

Ans. (3)

50. In the standard die the sum of opposite faces always remains –

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

Ans. (2)