

राष्ट्रीय प्रतिभा खोज परीक्षा (प्रथम स्तर) 2017
NATIONAL TALENT SEARCH EXAMINATION (FIRST LEVEL) 2017

210 - A

Roll No. रोल नम्बर

1701 - 181

Booklet Number पुस्तिका संख्या

17831

MENTAL ABILITY TEST
(For Students of Class X)

Time : 45 Minutes Max. Marks : 50
(For Blind Candidates Time : 1 Hour)

INSTRUCTIONS TO CANDIDATES

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

- Answers are to be given on a separate answer sheet (OMR sheet).
- 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.
- There are 50 questions in this test. All are compulsory.
- Please follow the instructions given on the answer sheet for marking the answers.
- 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.
- 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.
- Rough work can be done on the given Blank Pages at the back of the booklet but not on the answer sheet/loose paper.
- Every correct answer will be awarded one mark. There will be no negative marking.
- Please return the Answer sheet (OMR) only to the invigilator after the test.
- Hindi version of the question paper will be considered as final in case of any dispute arising out of variation in translated version.

PLEASE TURN OVER THE PAGE AND START YOUR WORK.

बौद्धिक योग्यता परीक्षा

(कक्षा X के विद्यार्थियों के लिए)

समय : 45 मिनट पूर्णांक : 50
(दृष्टिहीन अभ्यर्थियों के लिए समय : 1 घंटा)

परीक्षाधियों के लिए निर्देश

प्रश्न पुस्तिका खोलने से पहले निम्न निर्देशों को ध्यान से पढ़िए।

- उत्तर एक अलग उत्तर-पत्रक (ओ० एम० आर० शीट) में देने हैं।
- कृपया अपना रोल नम्बर जैसा कि आपके प्रवेश पत्र पर दिया गया है, निर्देशानुसार टेस्ट पुस्तिका पर बहुत स्पष्ट लिखिये और उत्तर-पत्रक पर दिये गये गोलों को काला करें।
- इस परीक्षा में 50 प्रश्न हैं। सभी प्रश्न अनिवार्य हैं।
- कृपया उत्तर चिह्नित करने के लिए उत्तर-पत्रक पर दिये गये निर्देशों को ध्यान से समझ कर उनकी अनुपालना कीजिए।
- यदि आप किसी प्रश्न का उत्तर नहीं जानते हैं तो उस पर बहुत समय न गंवाइये और अगले प्रश्न पर बढ़ जाइये। यदि बाद में समय मिले तो जिन प्रश्नों को आपने पहले छोड़ दिया था, उन पर वापस आकर उनके उत्तर दीजिए।
- क्योंकि इस प्रश्न पत्र के लिए निर्धारित समय बहुत सीमित है, इसलिए इसका अधिकतम उपयोग कीजिये और किसी प्रश्न पर बहुत समय न लगाइये।
- रफ कार्य पुस्तिका के अंत में दिये गये रिक्त पृष्ठों पर किया जा सकता है किन्तु उत्तर-पत्रक/अलग कागज पर नहीं।
- प्रत्येक सही उत्तर का एक अंक प्रदान किया जाएगा। इसमें शून्यवक अंकन नहीं होगा।
- कृपया परीक्षा के बाद केवल उत्तर-पत्रक (ओ० एम० आर०) ही निरीक्षक को लौटाइए।
- अनुवादित विवरण में अन्तर से उठे किसी भी विवाद की स्थिति में प्रश्न-पत्र के हिन्दी अनुवाद को निर्णायक माना जाएगा।

कृपया पृष्ठ पलटिये और अपना कार्य आरम्भ कीजिए।

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MENTAL ABILITY TEST (MAT) PAPER

Questions (1-4)

Direction : In each of the questions 1 to 4 a letter series is given 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. A, D, G, J ?
 (1) I (2) M (3) X (4) None of these
2. LO, JQ, HS, ?
 (1) FU (2) FQ (3) EV (4) DW
3. A, C, F, J, O, ?
 (1) P (2) T (3) S (4) U.
4. ZXV, TRP, NLJ, ?
 (1) HEF (2) HFD (3) EFH (4) IGE.

Questions (5-8)

Direction : In each of the questions 5 to 8 a number series is given 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. 121, 144, 169, ? , 225, 256.
 (1) 196 (2) 296 (3) 220 (4) 222
6. 5, 10, 20, ? , 80.
 (1) 35 (2) 40 (3) 45 (4) 50.
7. 4, 8, 9, 27, 16, ? , 25, 125.
 (1) 8 (2) 16 (3) 25 (4) 64
8. 2, 3, 5, 8, ? , 17.
 (1) 6 (2) 12 (3) 13 (4) 15

Questions (9 -11)

Direction : In each of the questions below two statements and two conclusions numbered I and II are given. You have to take the given two statements to be true even it 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 dancers are singers.
 (ii) : All singers are teachers.
 Conclusions : (I) : All dancers are teachers.
 (II) : Some singers are dancers.
 (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.

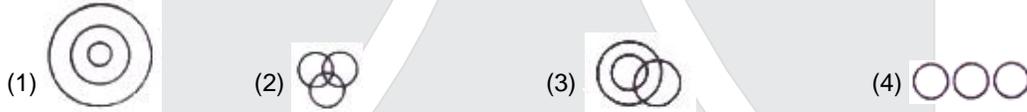
10. Statements : (i) : Some fruits are mangoes.
(ii) : Some fruits are not guavas.
Conclusions : (I) : All fruits are mangoes.
(II) : All mangoes are fruits.
(1) Only conclusion I is true
(2) Only conclusion II is true
(3) Both conclusions I and II are true
(4) Neither conclusion I nor conclusion II is true

11. Statements (i) : No horse is dog.
(ii) : All dogs are elephants.
Conclusions (I) : No elephant is horse.
(II) : Some elephants are dogs.
(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

12. Which of the following Venn diagrams correctly represents quadrilateral, rectangle and square ?

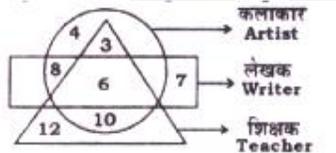


13. Which of the following Venn diagrams correctly represents female, mother and doctor ?



Questions (14 - 15)

Give answer according to the following Venn diagram:



14. Total number of teachers is
(1) 12 (2) 31 (3) 19 (4) 22.
15. How many artists are there who are writer but not teacher?
(1) 8 (2) 14 (3) 13 (4) 7.

Questions (16 - 19)

Direction : 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) ABYZ (2) EFUV (3) IJQR (4) MNOP.
17. (1) $(10)^3$ (2) $(100)^2 \div 10$. (3) $2^3 \times 5^3$ (4) $2000 - 2$
18. (1) Pacific Ocean (2) Asia (3) Europe (4) Africa.

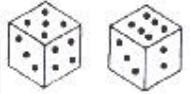
19. (1) Nepal (2) Pakistan (3) Sri Lanka (4) Australia.

20. In the given die the opposite side of the face 3 is having which number ?



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

21. The two positions on a dice are shown below. If 1 is at the bottom then what will be on the top ?



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

Questions (22 - 23)

Direction: Answer the questions on the basis of cube:

A cube is painted blue on all faces and it is cut into 64 small cubes of equal size. Now answer the following questions :

22. How many cubes are not painted on any face?

(1) 8 (2) 16 (3) 27 (4) 54.

23. How many cubes are there which are painted on one face only?

(1) 8 (2) 16 (3) 24 (4) 32

24. If in a coded language the word 'RAMESH' is written as 'AEHRMS' then in the same code language 'POET' will be written as

(1) EPTO (2) PEOT (3) ETOP (4) OTPE.

25. If in a coded language the word SCHOOL is written as UAJMQJ then PRINCIPLE will be written as

(1) RTKPEKRCN (2) NPGLAGNJB (3) RPKLEGRJG (4) RPKLEKRJG.

Questions (26 - 27)

Following alphabets are written in a special coded language like:

B L A C K W H I T E
0 1 2 3 4 5 6 7 8 9

26. Then code 62830 will be written as

(1) HATCB (2) HATEC (3) HATBC (4) HATCE

27. 'BHICK' will be coded as

(1) 06734 (2) 6734 (3) 6743 (4) 06743

28. Sailesh introduces Mahipal as the son of the only brother of his father's wife How is Mahipal related to Sailesh ?

(1) Cousin (2) Son (3) Maternal uncle (4) Son-In-law

29. Ramesh travels 3 km to east then moves to right and travels 5 km and at the end he again moves right and travels 15 km. Then the distance and direction of initial point from Ramesh is

(1) 13 km south - west (2) 13 km north-east (3) 12 km north - east. (4) 12 km south-east

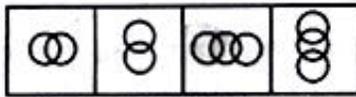
30. How many 5s are there in the the following sequence which are immediately followed by 3 but not immediately preceded by 7 ?

4 3 6 5 7 5 3 6 4 5 7 3 5 7 3 5 3

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

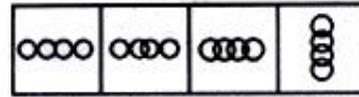
Direction : In questions 31 to 34 there are two sets of figures. One set contains problem - figures while the other has answer-figures. There is a sequence according to which the problem - figures are arranged . You have to select an answer-figure which can be added in sequence with the problem - figures.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

31. Problem-figures



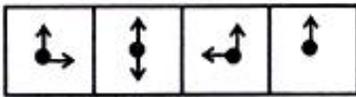
(A) (B) (C) (D)

- Answer-figures



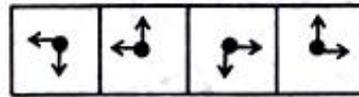
(1) (2) (3) (4)

32. Problem-figures



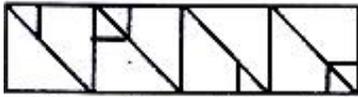
(A) (B) (C) (D)

- Answer-figures



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

33. Problem-figures



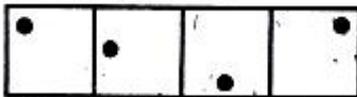
(A) (B) (C) (D)

- Answer-figures



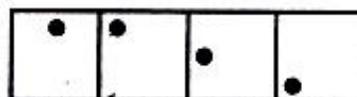
(1) (2) (3) (4)

34. Problem-figures



(A) (B) (C) (D)

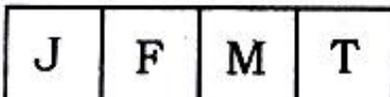
- Answer-figures



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

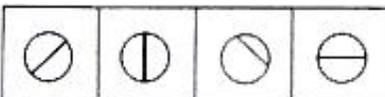
Direction : Question (35-38) In questions 35 to 38 there are four figures given. One of these does not correlate with the rest of the figures. Find out that odd figure.

- 35.



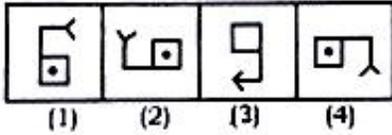
(1) (2) (3) (4)

- 36.

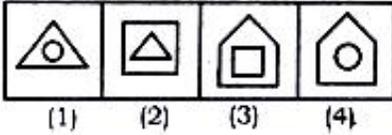


(1) (2) (3) (4)

37.

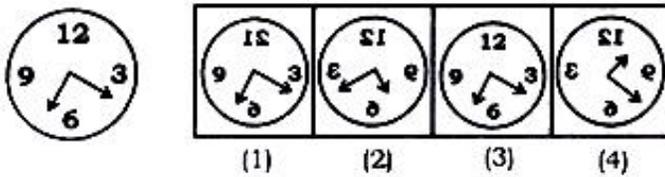


38.

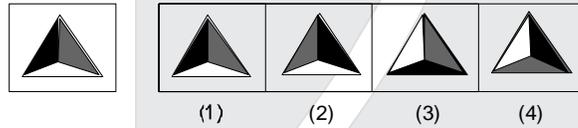


Direction : Question (39-40) In questions 39 to 40, find the correct mirror image of the given figures, when mirror is placed on right side of the figure.

39.



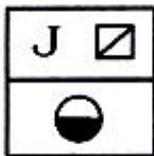
40.



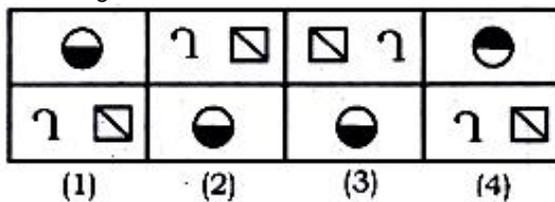
Questions (41 - 42)

Direction: In questions 41 and 42 find the correct water image of the given figure.

41. Question-figure



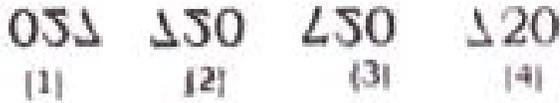
Answer-figures



42. Question-figure

720

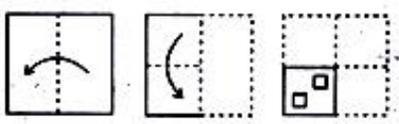
Answer-figures



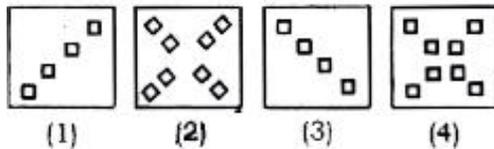
Questions (43 - 44)

Direction : In the following Questions 43 - 44, figures showing a sequence of folding and cutting a paper are given. Which could resemble the figure in the Answer figure?

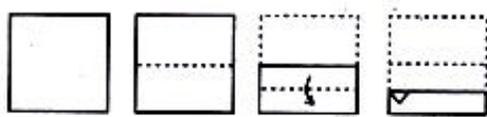
43. Question-figures



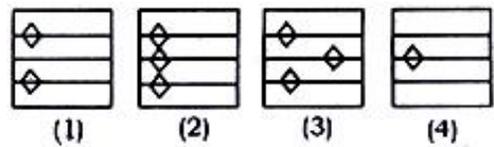
Answer-figures



44. Question-figures



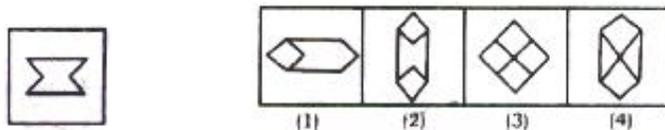
Answer-figures



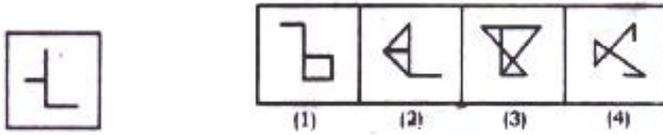
Questions (45 - 46)

Direction: In the following figure there is a question figure, which is embedded one out of four figures. Trace out the correct alternative.

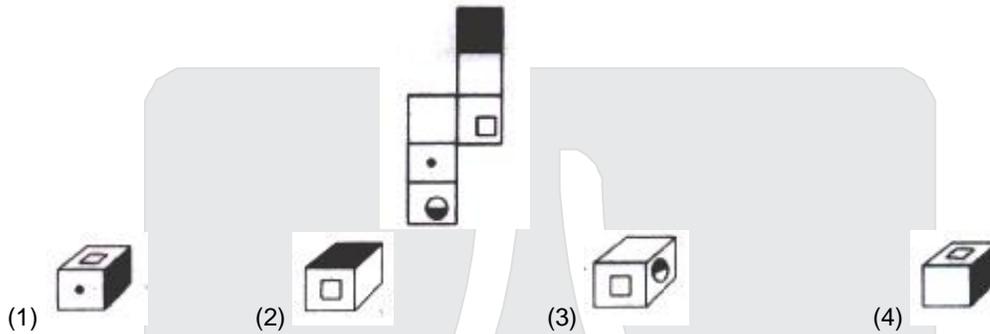
45.



46.



47. In the given figure squares are folded and a cube is formed. Then how will it be seen from the following?



48. How many numbers between 11 to 50 are there which are exactly divisible by 7 but not divisible by 3 ?

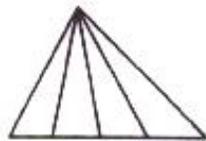
- (1) 3 (2) 4 (3) 5 (4) 6

49. Determine the number of pentagons in the following figure:



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

50. Determine the number of triangles in the following figure:



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

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