



NTSE (STAGE-II)

MENTAL ABILITY TEST (MAT)

(ACADEMIC SESSION 2015-2016)

SAMPLE PAPER

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. Answers are to be given on a separate OMR sheet.
2. There are 50 questions in this test. All are compulsory.
3. Please follow the instructions given on the OMR sheet for marking the answers.
4. Mark your answers for questions 1–50 on the OMR sheet by darkening the circles.
5. There will be a deduction of 1/3 marks for every wrong answer and no marks will be deducted for unattempted questions.
6. 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.
7. 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.
8. Rough work can be done anywhere in the booklet but not on the OMR sheet/loose paper.
9. Every correct answer will be awarded one mark.
10. Please return the Test-Booklet and OMR sheet to the invigilator after the test.

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Your Hard Work Leads to Strong Foundation

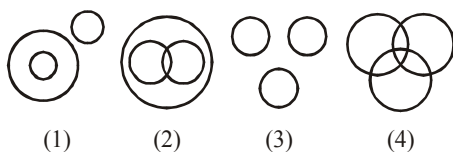
HAVE CONTROL → HAVE PATIENCE → HAVE CONFIDENCE ⇒ 100% SUCCESS

1. Consider the following series :
 A B C D X Y Z | Y X B A | B C D Y Z
 | Y X C B A | B C YZ
 Which letter occupies the 1000th position in the above series ?
 (1) B (2) C (3) X (4) Y

Direction (Q.2 to Q.6) : Seven friends Kamla, Manish, Rohit, Amit, Gaurav, Pritam and Priya are sitting in a circle. Kamla, Manish, Rohit, Amit, Pritam and Priya are sitting at equal distances from each other. Rohit is sitting two places right of Pritam, who is sitting one place right of Amit. Kamla forms an angle of 90° degrees from Gaurav and an angle of 120° degrees from Manish. Manish is just opposite Priya and is sitting on the left of Gaurav.

2. Who is the only person sitting between Rohit and Manish?
 (1) Pritam (2) Amit (3) Gaurav (4) Kamla
3. Gaurav is not sitting at equal distances from ?
 (1) Rohit and Pritam (2) Amit and Kamla
 (3) Manish and Pritam (4) All of the above
4. Gaurav is sitting of Priya.
 (1) to the left (2) to the right
 (3) two places right (4) none of these
5. The angle between Gaurav and Manish in the clockwise direction is
 (1) 150° (2) 180°
 (3) 210° (4) None of these
6. Which of the following statements is not correct?
 (1) Pritam is between Manish and Kamla.
 (2) Manish is two places away from Priya.
 (3) Gaurav is sitting opposite of Pritam.
 (4) All of the above

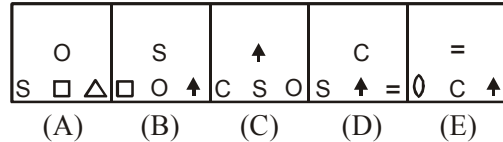
Directions (Q.7 & Q.8) : Choose the Venn diagram which best illustrates the three given classes in each question :



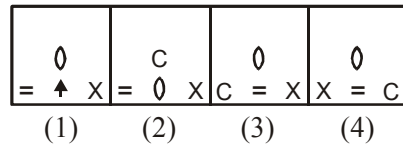
7. Machine, Lathe, Mathematics.
 8. Yak, Zebra, Deer

9. Each of the following question consists of five figures marked A, B, C, D and E called the Problem Figures followed by four other figures marked 1, 2, 3 and 4 called the Answer Figures. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures

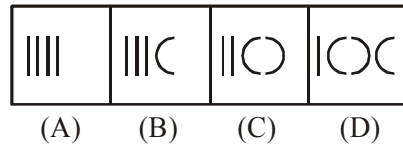


Answer Figures

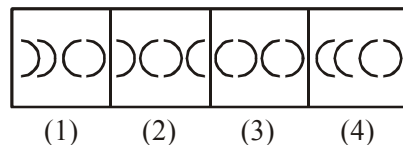


10. Each of the following question consists of four. Problem Figures marked A, B, C and D and four Answer Figures marked 1, 2, 3 and 4. Select a figure from amongst the Answer Figures which will continue the series established by the four Problem Figures.

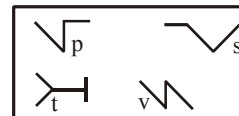
Problem Figures



Answer Figures

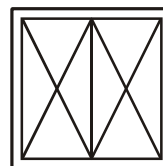


11. Consider the figures given below and answer the following questions.

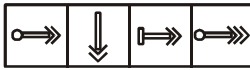
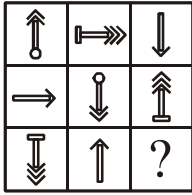


Which of the above figures is embedded in the figure given below?

- (1) p
 (2) s
 (3) t
 (4) v

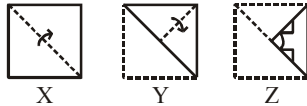


12. In the following question, find out which of the answer figures (1), (2), (3) and (4) completes the figure matrix?

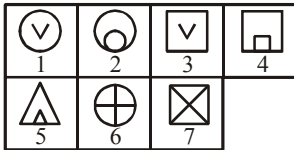


(1) (2) (3) (4)

13. In the following question consists of a set of three figures X, Y and Z showing a sequence of folding of a piece of paper. Figure (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of figure (Z).

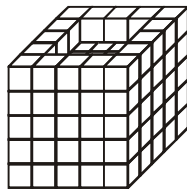


14. In the following question, group the given figures into three classes using each figure only once.



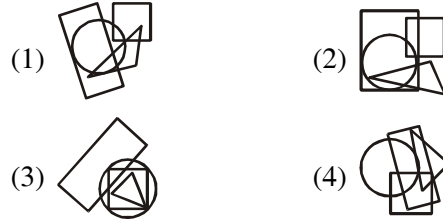
- (1) 1, 2, 6; 3, 4, 7; 5 (2) 1, 3; 2, 6; 4, 5, 7
(3) 1, 2, 6, 7; 3; 4, 5 (4) 1, 3; 2, 4, 5; 6, 7

- Directions (Q.15 & Q.16) :** Some equal cubes are arranged in the form of a solid block as shown in the adjoining figure. All the visible surfaces of the block (except bottom) are then painted.



15. How many cubes do not have any of the faces painted?
(1) 27 (2) 32 (3) 36 (4) 40

16. How many cubes have only one face painted?
(1) 9 (2) 45 (3) 57 (4) 62
17. In the following question, from amongst the figures marked (1), (2), (3) and (4), select the one which satisfies the same conditions of placement of the dot as in figure (X).



18. In the following question, there is a relationship between the two figures on the left of the sign (::). The same relationship exists between the two to the right of the sign (::), of which one is missing. Find the missing one from the alternatives.



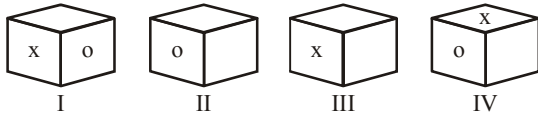
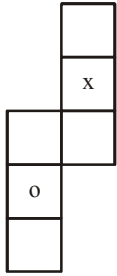
- Directions (Q.19 & Q.20) :** Some words are given in column

- I. These words are written in a code language in column.
II. The code equivalents of the words given in column I and column II are not necessarily in the corresponding order. Choose the correct code for words from the given alternatives.

Column I	Column II
(i) Kahu chala na	hum kuch ja
(ii) Aj tak na	ek ja kam
(iii) Man tak pana	saj ek ada
(iv) Hum chala man	Kuch not ada
(v) Hum na jai	not kim ja

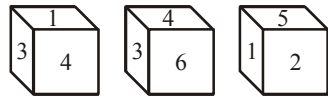
19. Which word will be code for word Aj?
(1) ada (2) hum (3) kuch (4) kam
20. Which word will be code for Hum?
(1) ja (2) not (3) kuch (4) ek

21. In the following question, the figure is folded to form a box. Choose from among the alternatives the box or boxes that can be formed by folding the figure.



- (1) Only IV (2) Both II and III
(3) Only III (4) Both I and IV

Directions (Q.22 & Q.23) : A dice is thrown 3 times and its 3 positions are given. Select the alternative which provides correct answer to the question asked.



22. Which number is opposite 4?
(1) 1 (2) 3 (3) 5 (4) 6

23. Which number is opposite 1?
(1) 2 (2) 3
(3) 4 (4) 6

24. A group of 78 people watch Zee TV, Star Plus or Sony. Of these 36 watch Zee TV, 48 watch Star Plus and 32 watch Sony. If 14 people watch Zee TV and Star Plus, 20 people watch Star Plus and Sony and 12 people watch Sony and Zee TV find the ratio of the number of people who watch only Zee TV to the number of people who watch only Sony.

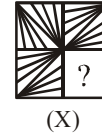
- (1) 3 : 2 (2) 5 : 3
(3) 7 : 4 (4) 9 : 4

25. Choose the odd figure out:



- (a) (b) (c) (d) (e)
(1) (e) (2) c
(3) (b) (4) (b), (c) and (e)

26. Select the figure from amongst the options, which when placed in the blank-space of figure (X) would complete the pattern.



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

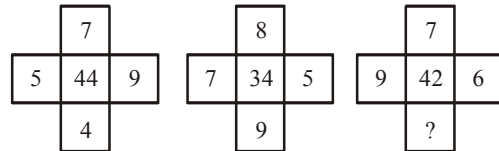
27. In the following question, some numbers are given in a sequence. Find out the number(s) from the alternatives, which will come in place of the question mark to continue the sequence.
55, 168, 57, 120, 60, 80, 62, 48, 65, 24, ?, ?
(1) 69, 11 (2) 67, 8 (3) 8, 71 (4) 6, 72

Directions (Q.28 & Q.29) : In the following questions, there is a relationship between the two numbers/letters/figures on the left of the sign (::). The same relationship exists between the two to the right of the sign (::), of which one is missing. Find the missing one from the alternatives.

28. DGOT : JKUX :: FINP : ?
(1) KMTU (2) LNTS
(3) LMTT (4) MNTU

29. FILP : AEIN :: IKNT : ?
(1) CGLR (2) EGJR (3) DGKR (4) DHLS

30. In the following question the cells of a square are filled with numbers with one number missing in a cell. Find from the alternatives the number, which will replace the question mark (?) in the cell.



- (1) 3 (2) 4 (3) 5 (4) 7

31. In the given series
1, 8, 3, 5, 1, 3, 7, 8, 1, 5, 7, 3, 5, 8, 3, 1, 5, 3, 7,
1, 8, 3, 5, 3, 7, 8, 3, 5, 1, 7, 3, 7, 5, 1, 8, 3, 1, 7,
1, 8, 3, 8, 5, 1
how many times do the two consecutive (i.e. number one after the other) have a difference of 4 ?

- (1) 6 (2) 9 (3) 11 (4) 13

32. Gopal is elder by 4 years to Govind, After 16 years Gopal will be thrice his present age and Govind will be five times of his present age. How old is Gopal ?

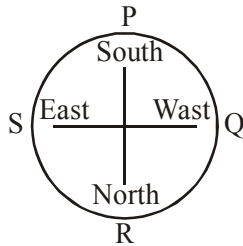
- (1) 4 years (2) 8 years
(3) 12 years (4) 16 years

33. If in a particular year, 16th June was Friday, then the first Friday in July of that year will fall on which date ?

- (1) 5th July (2) 6th July
(3) 7th July (4) 8th July

34. In a given circle directions are given and places of 'P' 'Q' 'R' & 'S' have been shown. If 'P' moves one & half quarter clockwise in which direction 'P' will be ?

- (1) North - East Region
(2) North - West Region
(3) South - East Region
(4) South - West Region



35. Take the given statement as true and decide which of the conclusion logically follows from the statement.

Statement : Demonstrators protested against the New Education Policy.

Conclusions :

- I. Demonstrators are anti-social beings.
II. All education policies are bad.
III. Demonstrators often protest.

- (1) I and II follow
(2) I and III follow
(3) Conclusions I, II and III follow
(4) Data is insufficient to draw conclusion

36. Consider these two statements to be true :

- All ministers are law graduates.
- Some ministers are ladies.

Which of these inferences is correct ?

- (1) All lady ministers are law graduates
(2) No lady minister is a law graduate
(3) No male minister is a law graduate
(4) All law graduate ministers will be ladies

37. If '+' means 'multiplied', '-' means 'divided', 'x' means 'plus' and '÷' means 'minus', then $(18 + 10 \times 20) - 8 \div 6 = ?$

- (1) 92 (2) 35 (3) 26 (4) 19

38. If '+' means 'divided', '-' means 'multiplied', 'x' means 'plus' and '÷' means 'minus', then $(280 + 10 \times 20) - 8 \div 6 = ?$

- (1) 378 (2) 258 (3) 70 (4) 64

39. Shalini is standing at the South-East corner of a rectangular field. She starts crossing the field diagonally. After walking half the distance, she turns right, walks some distance and turns left. Which direction Shalini facing now ?

- (1) South - East (2) South - West
(3) North - East (4) North - West

Direction (Q.40 & Q.41) : The following questions are based on letters sequence. In each sequence some letters are missing. Find the correct alternative in each question of fill the blanks.

40. _aba _ a _ a _ ab _

- (1) a a b a a (2) b a b b a
(3) a b b a b (4) b b a a b

41. n_mn_mm_nm_n

- (1) n m m n (2) m n n m
(3) n n m m (4) m m n m

42. If the first and the third letters in the letter group DISTRIBUTION are interchanged and also second and fourth letters, the fifth and seventh and so on then which of the following would be seventh letter from the left ?

- (1) U (2) R (3) B (4) T

Direction (Q.43 & Q.44) : In each of the following questions, arrange the given words in the sequence in which they occur in the dictionary any then choose the correct sequence :

43. (1) Preach (2) Praise
(3) Precinct (4) Precept
(5) Precede

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

44. (1) Select (2) Seldom
 (3) Send (4) Selfish
 (5) Seller
 (1) 1, 2, 4, 5, 3 (2) 2, 1, 5, 4, 3
 (3) 2, 1, 4, 5, 3 (4) 2, 5, 4, 1, 3

45. A girl introduced a boy as the son of the daughter of the father of her uncle. The boy is girl's.

- (1) Cousin (2) Son
 (3) Uncle (4) Son-in-law

46. Arun said, "This girl is the wife of the grandson of my mother." Who is Arun to the girl ?

- (1) Father (2) Grand-father
 (3) Husband (4) Father-in-law

Direction (Q.47 & Q.48) : The numbers inside the figure given below follow some rules. Identify the number which when substituted for the question mark (?) maintains that rule.

47.

1	2	3
4	5	6
4	?	18

- (1) 7 (2) 8 (3) 9 (4) 10

48.

13	16	17
23	16	37
59	?	91

- (1) 32 (2) 40 (3) 48 (4) 50

49.

In a certain code language, 'pit dar na' means 'you are good'; 'dart ok pa' means 'good and bad'; 'tim na tok' means 'they are bad'. In that language, which word stands for 'they' ?

- (1) na (2) tok (3) tim (4) pit

50.

If red is called 'air', air is called 'black' black is called 'sky', key is called 'blue', blue is called 'wind' and wind is called 'white', where do birds fly ?

- (1) air (2) sky (3) wind (4) blue

SAMPLE PAPER (MAT)
ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	1	3	4	4	4	4	1	3	3	3	2	1	3	4	1	3	4	2	4	2
Que.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ans.	2	3	4	4	3	2	2	3	3	4	1	2	3	2	4	1	4	1	4	1
Que.	41	42	43	44	45	46	47	48	49	50										
Ans.	2	2	1	3	1	4	4	3	3	4										

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Your Hard Work Leads to Strong Foundation