

NTSE STAGE – I

MAT

PAPER – I – A

SMS – 2016 – 17

Time : 45 Minutes
Full Marks : 50
No. of items : 50

INSTRUCTIONS :

1. Each question has four probable answers of which one is correct. You have to choose the correct one and blacken your choice in the OMR answer sheet by a black/blue ball point pen.
2. For wrong answer, there is no deduction of marks. One mark shall be awarded for each correct response.
3. No mark will be awarded for a question if a candidate darkens more than one choice.

ROLL NO. : _____

NAME : _____

NTSE STAGE – I QUESTION PAPER

MAT (SET – C)

Directions (1-4): Find out the alternative which will replace the question (?) mark.

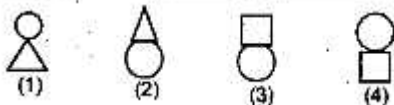
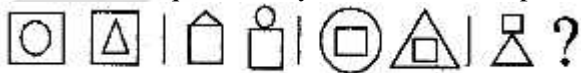
1. REASON : SFBTPO :: THINK : ?
(A) SGHMJ (B) UIJOL (C) UHNKI (D) UJKPM
2. ACFJ : ZXUQ :: EGIN : ?
(A) VUSQ (B) UTRP (C) VRPM (D) VTRM
3. corden : zrogbq :: ? : pxivro
(A) mulmul (B) sulsul (C) munmun (D) srspql
4. Which number replaces the question mark?

8	EJI	3
UFK		PPQ
9	MHO	7

- (A) 8 (B) 12 (C) 10 (D) 14

Directions (5-6): Find out the wrong number in the given series.

5. 582,605,588,611,634,617,600
(A) 634 (B) 611 (C) 605 (D) 600
6. 7,8,18,57,228,1165,6996
(A) 8 (B) 18 (C) 57 (D) 228
7. At 3.40 AM, the hour hand and the minute hand of a clock form an angle of
(A) 120° (B) 125° (C) 135° (D) 130°
8. A number consists of two digits. If the digits interchange places and the new number is added to the original number, then the resulting number will definitely be divisible by:
(A) 3 (B) 5 (C) 9 (D) 11
9. if A = x% of y and B = y% of x, then which of the following is true?
(A) A=B (B) A < B (C) A > B (D) None of these
10. Look at the sequence of symbols to find the pattern. Select correct pattern at the (?) mark.



- (A) 1 (B) 2 (C) 3 (D) 4

Directions (11-13): Complete the series.

11. gfe_ig_eil_fei_gf_ii
(A) eifgi (B) figie (C) ifgie (D) ifige
12. C,Z,F,X,I,V,L,T,O,?,?

- (A) O,P (B) P,Q (C) R,R (D) S,R

13. 5824,5242,?,4247,3823
 (A) 4467 (B) 4718 (C) 4856 (D) 5164

Directions (14-16): A,B,C,D,E,F and G are sitting in a row facing North. F is to the immediate right of E. E is 4th to the right of G. C is the neighbor of B and D. Person who is third to the left of D is at one of the ends.

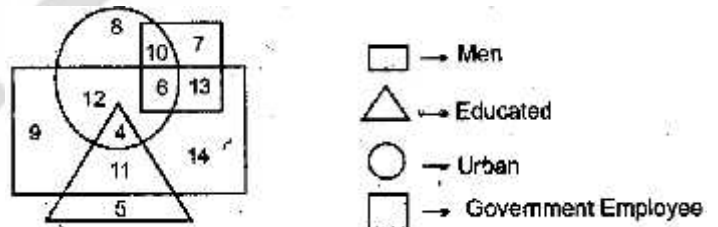
14. Who are to the left of C?
 (A) Only B (B) G, B and D (C) G and B (D) D,E,F and A
15. Who are the neighbors of B?
 (A) C and G (B) C and G (C) G and F (D) C and E
16. Which of the following statements is not true?
 (A) E is to the immediate left of D
 (B) A is at one of the ends
 (C) G is to the immediate left of B
 (D) F is second to the right of D

Directions (17-18): You are given alphabets from A to Z. Find out which of the letter series follows the given rule.

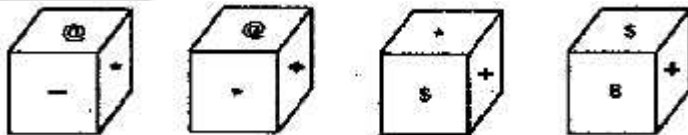
17. Rule: The letters are not according to a general rule.
 (A) CEGIKM (B) MORTVX (C) PRTVXZ (D) ACEGIK
18. Rule: Number of letters skipped in between adjacent letter in the series is odd.
 (A) EIMQV (B) FIMRX (C) BDHLR (D) MPRUX

Directions (19-20):

In the following diagram rectangle represents men, triangle represents educated, circle represents urban and square represents government employees.

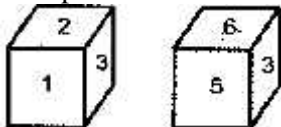


19. Which one of the following number represents the educated men but not urban?
 (A) 9 (B) 5 (C) 4 (D) 11
20. Which one of the following represents women who are urban as well as government employee?
 (A) 7 (B) 13 (C) 10 (D) 6
21. four positions of a die are shown. Which symbol or number will be on the face opposite to the face with symbol * (star)?



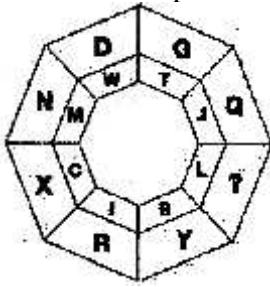
- (A) @ (B) \$ (C) 8 (D) +

22. Two positions of a die are shown. Which digit will appear on the face opposite to the face with number 4?



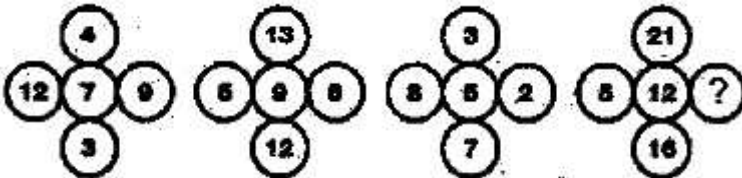
- (A) 3 (B) 5 (C) 6 (D) 2

23. Which letter represents the question mark?



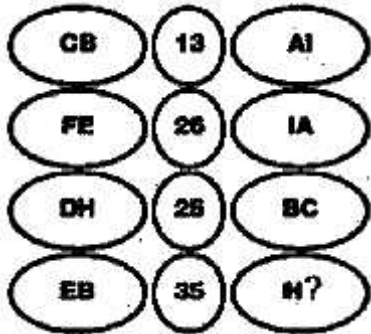
- (A) M (B) O (C) Q (D) R

24. Which number replaces the question mark?



- (A) 4 (B) 6 (C) 8 (D) 12

25. Which letter replaces the question mark?



- (A) I (B) T (C) R (D) G

26. if A3P means A is the mother of P; A4P means A is the brother of P; A9P means A is the husband of P and A5P means A is the daughter of P, then which of the following means that K is the mother in law of M?

- (A) M9N3K4J (B) M9N5K3J (C) K5J9M3N (D) K3J94M

Directions (27-29): Select a figure form amongst the Answer figures which will continue the same series as established by the five problem Figures.

27. **Problem Figure** **Answer Figure**

(A) 1 (B) 2 (C) 3 (D) 4

28. **Problem Figure** **Answer Figure**

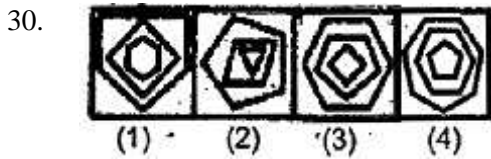
(A) 1 (B) 2 (C) 3 (D) 4

29. **Problem Figure** **Answer Figure**

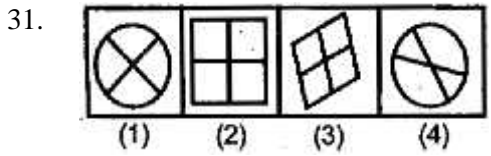
(A) 1 (B) 2 (C) 3 (D) 4

- (A) 1 (B) 2 (C) 3 (D) 4

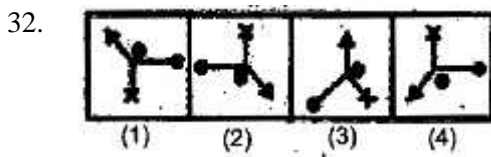
Directions (30-32): Choose the figure which is different from the rest



- (A) 1 (B) 2 (C) 3 (D) 4

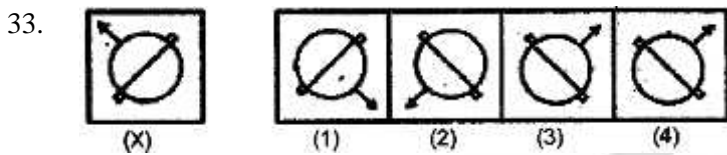


- (A) 1 (B) 2 (C) 3 (D) 4

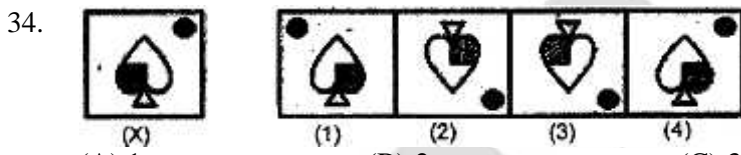


- (A) 1 (B) 2 (C) 3 (D) 4

Directions (33-34): Choose the correct mirror image of the given figure (x) from amongst the four alternatives.



- (A) 1 (B) 2 (C) 3 (D) 4

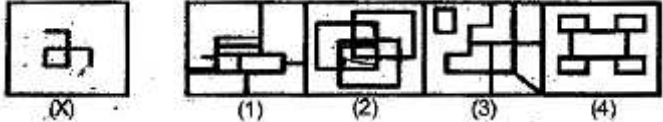


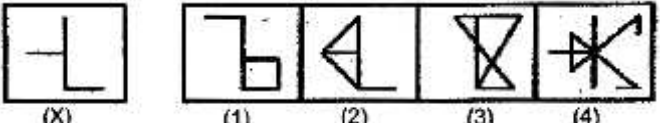
- (A) 1 (B) 2 (C) 3 (D) 4

35. 'peslligen' means 'basketball court'
 'ligenstrisi' means 'courtroom'
 'oltaganti' means 'placementtest'
 Which word could mean "guest room"?
 (A) peslstrisi (B) vosefstrisi (C) gantipesl (D) oltastrisi

36. 'mallonpiml' means 'blue light'
 'mallontifl' means 'blueberry'
 'arpantifl' means 'raspberry'
 Which word could mean "lighthouse"?
 (A) tifmallon (B) pimlarpan (C) mallonarpan (D) pimldoken

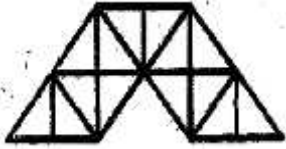
37. 'jalkamofti' means 'happy birthday'
 'moftihoze' means 'birthday party'
 'mentogunn' means 'goodness'
 Which word could mean "happiness"?
 (A) jalkagunn (B) mentohoze (C) moftihoze (D) hozemento

38. 
 (A) 1 (B) 2 (C) 3 (D) 4

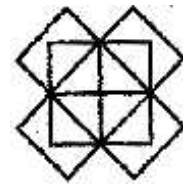
39. 
 (A) 1 (B) 2 (C) 3 (D) 4

Directions (40-41): Find the number of triangles in the given figure.


40. 
 (A) 18 (B) 20 (C) 24 (D) 27

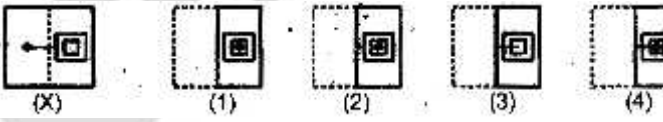
41. 
 (A) 23 (B) 27 (C) 31 (D) 29

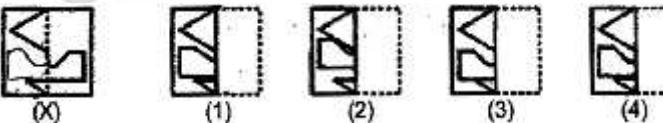
42. Find the number of squares rectangles in the given figure.
 (A) 20
 (B) 18
 (C) 16
 (D) 15



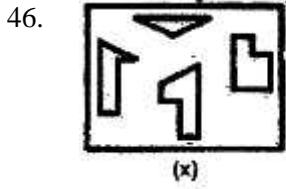
Directions (43-45): Find out from amongst the four alternatives as to how the pattern (X) would appear when the transparent sheet is folded at the dotted line.

43. 
 (A) 1 (B) 2 (C) 3 (D) 4

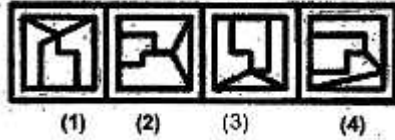
44. 
 (A) 1 (B) 2 (C) 3 (D) 4

45. 
 (A) 1 (B) 2 (C) 3 (D) 4

Directions (46-47): Find out which of the figures (1),(2),(3) and (4) can be formed from the pieces given in figure (X).



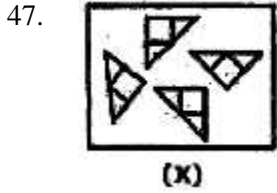
(A) 1



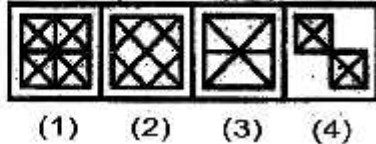
(B) 2

(C) 3

(D) 4



(A) 1

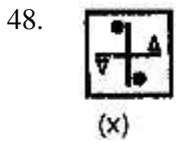


(B) 2

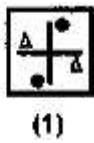
(C) 3

(D) 4

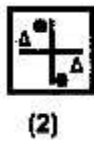
Directions (48-49): Choose the correct water image of the given figure (x) from amongst the four alternatives.



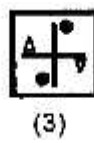
(A) 1



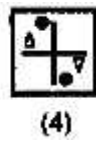
(B) 2



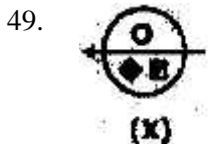
(C) 3



(D) 4



(D) 4



(A) 1



(B) 2



(C) 3



(D) 4



(D) 4

50. At the end of a meeting, the ten people present all shake hands with each other once. how many handshakes will there be altogether?

(A) 10

(B) 45

(C) 9

(D) 25



NTSE STAGE – I_MAT (SET – C) DATE: 06.11.2016
ANSWERS

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

HINTS & SOLUTION

1. B

2. D

Opposite letters

3. B

-3, +3, -3, +3

4. B

E → 5

M → 13

J → 10

F → 6

$$\frac{I \rightarrow 5}{24}$$

$$\frac{K \rightarrow 11}{30}$$

and so on.

5. A

$$\begin{array}{ccccccc} & +6 & & +6 & & +6 & \\ \underbrace{\hspace{1.5cm}} & & \underbrace{\hspace{1.5cm}} & & \underbrace{\hspace{1.5cm}} & & \\ 582, & 605, & 588, & 611, & \mathbf{634}, & 617, & 600 \\ & \underbrace{\hspace{1.5cm}} & & \underbrace{\hspace{1.5cm}} & & & \\ & +6 & & +6 & & & \end{array}$$

6. D

$$7 \times 1 + 1 = 8$$

$$8 \times 2 + 2 = 18$$

$$18 \times 3 + 3 = 57$$

$$57 \times 4 + 4 = 232$$

7. D

$$\theta = \left| \frac{11}{2} \times 40 - 30 \times 3 \right| = 130^\circ$$

8. D

9. A

$$A = \frac{x}{100} \times y$$

$$B = \frac{y}{100} \times x$$

$$\therefore A = B$$

10. C

11. C

gfeii | gfeii | gfeii | gfeii

12. C

13. B

$$\begin{array}{r} 5824 \quad 5242 \quad 4718 \\ \underline{582} \quad \underline{424} \quad \underline{471} \\ 5242 \quad 4718 \quad 4247 \end{array}$$

14. C

15. B

16. A

For Q. 14 to 16: G B C D E F A

17. B

18. C

19. D

20. C

21. C

22. A

23. B

24. B

$$\frac{\text{Sum}}{4} = \text{middle}$$

25. D

$$CB = 32$$

$$AI = \frac{19}{23}$$

26. B

27. C

28. A

29. C

30. A

31. D

32. C

33. C

34. A

35. B

36. D

37. A

38. B

39. B

40. C

41. D

42. A

43. B

44. D

45. C

46. C

47. B

48. C

49. A

50. B

$${}^{10}C_2 = \frac{10 \times 9}{2} = 45.$$