



**NATIONAL TALENT SEARCH EXAMINATION  
(NTSE-2017) STAGE -1  
MADHYA PRADESH STATE : MAT**

Date: 06/11/2016

Max. Marks: 50

**SOLUTIONS**

Time allowed: 45 mins

**Direction :** In question nos 1 to 5 there is a number series with one term missing shown by question mark (?). This term is one of the alternative given. Choose that number.

1. 36, ?, 24, 18, 12

(A) 22 (B) 28 (C) 38 (D) 30

**Ans. (D)**

**Sol.** Subtract 6 in each term.

2. 1, 1, 4, 8, 9, 27, 16, 64, 25, ?

(A) 81 (B) 100 (C) 125 (D) 121

**Ans. (C)**

**Sol.** In alternative series

1, 4, 9, 16, 25,.....

1, 8, 27, 64,....

Square of each term in first series and cube of each term in second series.

3. 3, 5, 8, 13, 21, ?, 55

(A) 25 (B) 49 (C) 36 (D) 34

**Ans. (D)**

**Sol.** Difference between two successive terms is of 2, 3, 5, 8...13

4. 80, 78, 75, 71, ?, 60

(A) 76 (B) 73 (C) 65 (D) 66

**Ans. (D)**

**Sol.** On adding -2, -3, -4, -5, -6.

5. 2, 7, 17, 32, 52, ?

(A) 77 (B) 64 (C) 72 (D) 81

**Ans. (A)**

**Sol.** On adding - +5, +10, +15, +20,.....

**Direction :** In question no. 6-10, there is a question mark in the blank space and it is only one of the four alternatives given under the question which satisfies the same relation as is found between the two patterns to the left of the sign :: given in the question. Find the correct alternatives.

6. BEGK : ADFJ :: PSVY : ?

(A) LOQT (B) ROUX (C) OTUZ (D) ORUX

**Ans. (D)**

**Sol.** Subtracting one from each term.

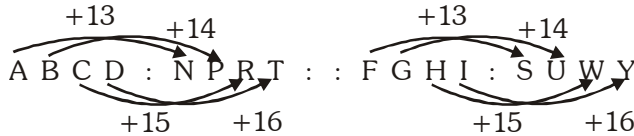
∴ ORUX is correct.

7. ABCD : NPRT :: FGHI : ?

- (A) KLMN (B) OQRT (C) RTUW (D) SUWY

Ans. (D)

Sol. Adding successively by +13, +14, +15, +16 in successive letter.



8. BLOCKED : YOLXPVW :: ? : OXFMXS

- (A) LAUNCH (B) DEBATE (C) LABOUR (D) RESULT

Ans. (A)

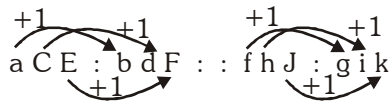
Sol. Order of alphabet's ranking from right as well as left side is same.

9. aCE : bdF :: fhJ : ?

- (A) ghk (B) gik (C) dfH (D) fhL

Ans. (B)

Sol. English alphabets in successive way.



10. Menu : Food :: Catalogue : ?

- (A) Rack (B) Newspaper (C) Library (D) Books

Ans. (D)

Sol. As 'menu' lists all the food items in a restaurant, similarly catalogue is a list of books in the library.

**Direction :** In Question no. 11 to 15, there are four terms in each question. The terms left to the symbol :: have the same relationship as the two terms to the right of symbol :: out of four terms one is missing which is one of the four alternative given, select and write the correct one in the answer sheet.

11. Teacher : Student :: Doctor : ?

- (A) Hospital (B) Nurse (C) Patient (D) Pathology

Ans. (C)

Sol. As 'teacher' provides service to the 'student', similarly 'doctor' provides service to the 'patient'.

12. Feather : Soft :: Glass : ?

- (A) Black (B) White (C) Light (D) Hard

Ans. (D)

Sol. As 'feather' is 'soft', similarly 'glass' is 'hard'.

13. Sky : Cloud :: Water : ?

- (A) River (B) Steam (C) Ice (D) Hot

Ans. (B)

Sol. As in the process of evaporation water is transform into steam and goes up in the sky and form cloud.

14. Bird : Flying :: Animal : ?

- (A) Running (B) Flying (C) Walking (D) Crying

Ans. (C)

Sol. A birds use to flying similarly animals use to walking.

15. Court : Justice :: School : ?

- (A) Teacher (B) Education (C) Ignorance (D) Student

Ans. (B)

Sol. As 'justice' is done by the 'court' similarly 'education' is provided in the 'school'.

16. Satyajit Ray is related to films in the same way as Picaso is related to....

- (A) Literature (B) Drama (C) Poetry (D) Painting

Ans. (D)

Sol. 'Picaso' is the painter.

17. Find the relationship -

Lucknow : Patna : Bhopal : Jaipur : ?

- (A) Indore (B) Mysore (C) Pune (D) Shimla

Ans. (D)

Sol. All cities are capital and Shimla is capital of H.P.

18. Which of the following does not belong to others ?

- (A) Tomato (B) Mango (C) Guava (D) Papaya

Ans. (B)

Sol. As all are fruits, but Mango contains only one seed in it and rest all have more than one seed in it.

19. If today is Sunday, after 90 days it will be :

- (A) Friday (B) Saturday (C) Sunday (D) Monday

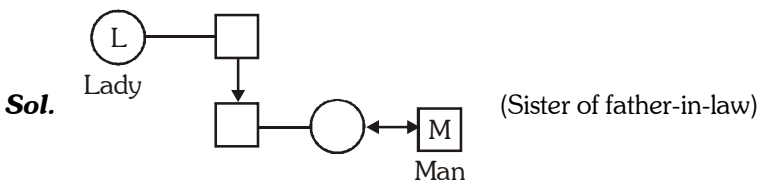
Ans. (B)

Sol. As 84th day will be the Sunday. So, after 6 days will be Saturday.

20. Pointing to a lady, a man said "The son of her only brother is the brother of my wife". How is the lady related to the man ?

- (A) Monther's sister (B) Grandmother (C) Sister of father-in-law (D) Maternal aunt

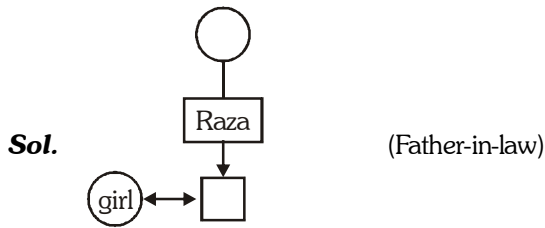
Ans. (C)



21. Raza said "This girls is the wife of the grandson of my mother". Who is Raza to the girl ?

- (A) Father (B) Grandfather (C) Husband (D) Father-in-law

**Ans. (D)**



**22.** If the 2nd September 2016 was Friday. How many Friday were there in the month ?  
(A) 3 (B) 4 (C) 5 (D) None of these

**Ans. (C)**

**Sol.** As Friday on 2nd, 9th, 16th, 23rd, 30th. So, there will be 5 Fridays.

**23.** Sara is older than Mala. Gopal is older than Mala but younger than Sara. Kapil is younger than Ram and Mala. Mala is older than Ram. Who is the eldest?  
(A) Sara (B) Mala (C) Kapil (D) Gopal

**Ans. (A)**

**Sol.** The appropriate order is -

SARA

GOPAL

MALA

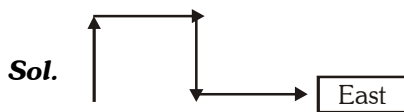
RAM

KAPIL.

Therefore Sara is eldest.

**24.** You go north, turn right, then right again and then go the left. In which direction are you now ?  
(A) North (B) South (C) East (D) West

**Ans. (C)**



**25.** In the given words find the odd one out -  
(A) Winter (B) Summer (C) Spring (D) Cloud

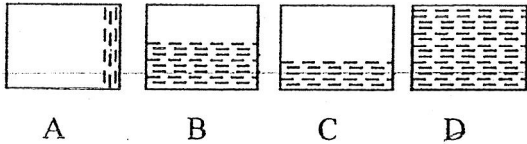
**Ans. (D)**

**Sol.** Except cloud, all are seasons.

Question no. 26 to 30 have a series with three figures. Bearing series in mind, pickup the fourth correct figure from the answer figure.



Answer shapes

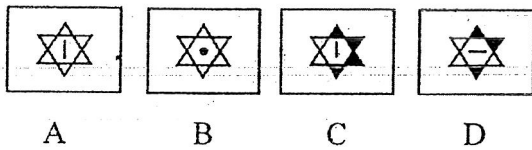


Ans. (D)

Sol. Tank is filled as  $1/4$ th,  $1/2$ ,  $3/4$  and finally full.

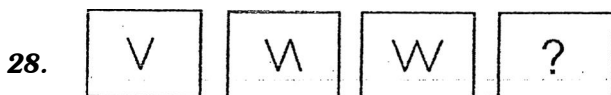


Answer shapes

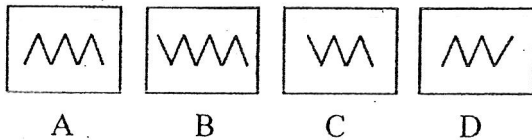


Ans. (C)

Sol. In clockwise direction, triangles are filled successively.

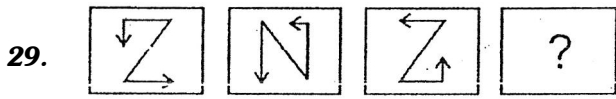


Answer figures

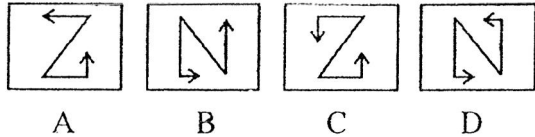


Ans. (C)

Sol. Number of lines increase successively.

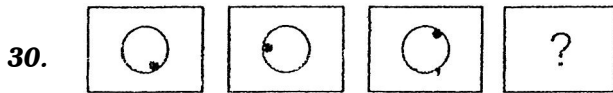


Answer figures

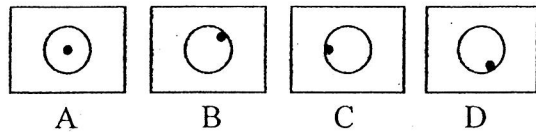


Ans. (B)

Sol. Bigger arrow is moving towards east, south, west and finally east while smaller arrow is moving towards south, west, north and finally east.



Answer figures



Ans. (NA)

Direction : On the basis of the following arrangement give answer of Question no. 31 and 32.

7, 8, 9, 7, 6, 5, 3, 4, 2, 8, 9, 7, 2, 4, 5, 9, 2, 9, 7, 6, 4, 7

31. How many 7s are preceded by 9 and followed by 6 :

- (A) 2 (B) 3 (C) 4 (D) 5

Ans. (A)

Sol. There are two 7s preceded by 9 and followed by 6.

32. Which figure has equal frequency ?

- (A) 2, 5, 3 (B) 2, 4, 5 (C) 3, 7, 5 (D) 8, 6, 5

Ans. (D)

Sol. 8, 6, and 5 have equal frequency = 2.

33. Which is correct missing letter ?

F	I	O
A	J	K
E	M	?

- (A) P (B) R (C) S (D) V

Ans. (B)

**Sol.** The sum of the rank of first and second column gives the rank of third column.

**34.** What is (?) missing number

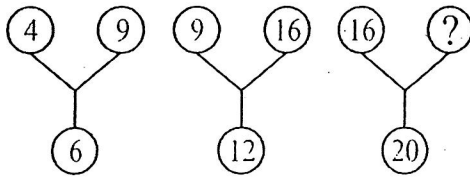


- (A) 38 (B) 39 (C) 40 (D) 44

**Ans. (A)**

**Sol.** In clockwise direction adding  $2^2$ , then  $3^2$  and finally  $4^2$ .

**35.** Find the missing character

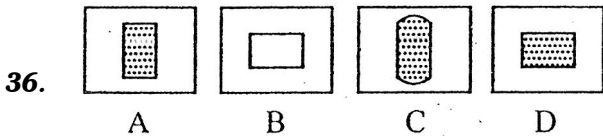


- (A) 21 (B) 25 (C) 35 (D) 45

**Ans. (B)**

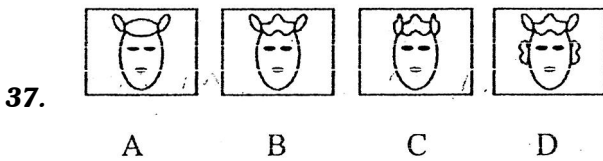
**Sol.** Factors of 6 are 3 and 2 and their squares are 9 and 4. In a similar way factors of 20 are 4 and 5 their squares are 16 and 25.

**Direction :** Question no. 36 to 38 each form a group with similar except one. Find the different one.



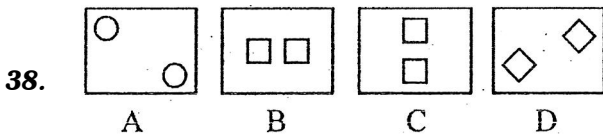
**Ans. (B or C)**

**Sol.** Answer is B when rectangle is empty, while answer is C when we consider the shape.



**Ans. (D)**

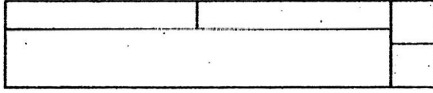
**Sol.** Because of ears are there in option (D).



**Ans. (A)**

**Sol.** Two circles are there in option (A), while rest options have squares in it.

**39.** What is the number of rectangles in the following figure ?

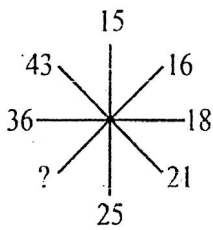


- (A) 6 (B) 7 (C) 9 (D) 11

**Ans. (C)**

**Sol.** No. of rectangles are 9.

**40.** In the following question there is a sign (?) at the vacant place. Find out the missing number.

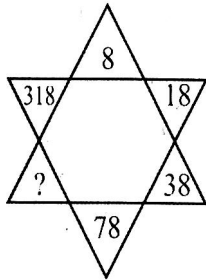


- (A) 28 (B) 32 (C) 30 (D) 35

**Ans. (C)**

**Sol.** Adding clockwise 1, 2, 3,..... so answer is (C).

**41.** In the following question there is a sign (?) at the vacant place. Find out the missing number.

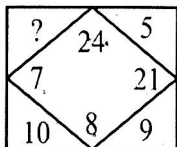


- (A) 68 (B) 140 (C) 156 (D) 158

**Ans. (D)**

**Sol.** Adding clockwise 10, 20, 40, 80 and 160. So answer is  $78+80 = 158$ .

**42.** In the following question, find out the missing number at the vacant place

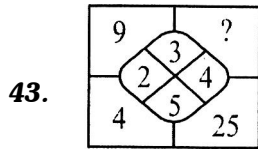


- (A) 12 (B) 14 (C) 4 (D) 13



**Ans. (C)**

**Sol.** Right upper corner is  $2^2 + 1$ , while right bottom corner is  $3^2$ , left bottom corner is  $3^2 + 1$  and so left upper corner will be  $2^2$ .



- (A) 10                                      (B) 12                                      (C) 20                                      (D) 16

**Ans. (D)**

**Sol.** In the corner all successive squares of 2, 3, 4, and 5.

**44.** A family consisted of a man, his wife, his three sons, their wives and three childrens in each son's family. How many members are there in the family ?

- (A) 12                                      (B) 14                                      (C) 17                                      (D) 19

**Ans. (C)**

**Sol.** There are 9 children and 4 couples. Therefore,  $9 + 8 = 17$ .

**45.** A 26 feet long piece of wood is cut to make three pieces of equal length, the length of each piece is

- (A) 8 feet 8 inches                      (B) 8 feet 2 inches                      (C) 8 feet 6 inches                      (D) 8 feet 4 inches

**Ans. (A)**

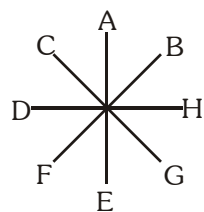
**Sol.** Divide  $26/3$ , so answer will be 8 feet 8 inches.

**Direction : In questions (46-48). Eight friends A, B, C, D, E, F, G and H are sitting around a circular table facing the centre, not necessarily in the same order. C is third to the left of E, B is not an immediate neighbour of either E or C. H is not an immediate neighbour of E, D is third to the right of B, H is second to the left of A. F is not immediate neighbour of H.**

**46.** Who is sitting third to the left of B ?

- (A) F                                      (B) A                                      (C) G                                      (D) B

**Ans. (A)**

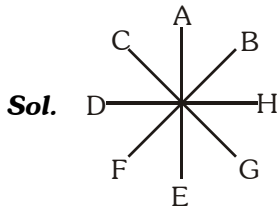


**Sol.**

**47.** Which of the following pairs of people correctly represents the pair of people who are immediate neighbour of H ?

- (A) DG                                      (B) GA                                      (C) AD                                      (D) BG

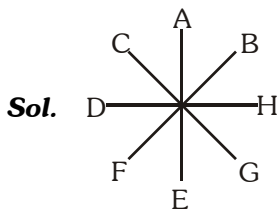
**Ans. (D)**



**48.** Who is sitting between B and C ?

- (A) H                                      (B) F                                      (C) A                                      (D) G

**Ans.** (C)



**49.** If farmer 'C' has two daughters - A and B as well as one son 'D' so what is the relation between D to A ?

- (A) Sister                                      (B) Bhabhi (sister-in-law)                                      (C) Uncle                                      (D) Brother

**Ans.** (D)

**Sol.** 'D' is the brother of 'A'.

**50.** If Ajay is taller than Tara, but shorter than Atul, Atul is shorter than Sharad then who is tallest ?

- (A) Ajay                                      (B) Tara                                      (C) Sharad                                      (D) Atul

**Ans.** (C)

**Sol.** 'Sharad' is taller than 'Atul', then 'Atul' is taller than 'Ajay' and 'Ajay' is taller than 'Tara'. So 'Sharad' is tallest.