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

Date: 06/11/2016

Max. Marks: 50 **SOLUTIONS** **Time allowed: 45 mins**

Direction : From question 1 to 6 question has four terms. Three terms are related in some way. One term is different from others. Find out the correct term which is different from three others and write native number on your answer sheet the proper question number.

1. (1) G I L P (2) D F J O (3) B D J K (4) E G J N

Ans. ***(3)***

Sol. Except (3) in all other three consonant and one vowel is there but in (3) all are consonant

2. (1) Iron (2) Copper (3) Brass (4) Bronze

Ans. ***(1)***

Sol. All have at least one constituent as copper except Iron

3. (1) 512 (2) 343 (3) 125 (4) 729

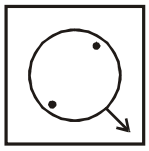
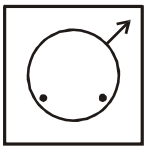
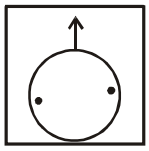
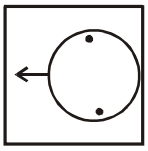
Ans. ***(1)***

Sol. All are cube of odd number except 512

4. (1) I J M R (2) C D G L (3) G H L R (4) E F I N

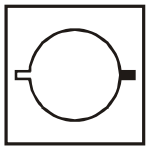
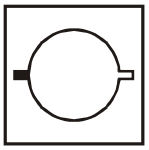
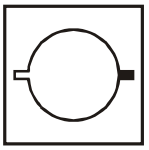
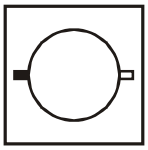
Ans. ***(3)***

Sol. terms are +1, +3, +5 except GHLR

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

Ans. ***(2)***

Sol. By observation

6. (1)  (2)  (3)  (4) 

Ans. ***(4)***

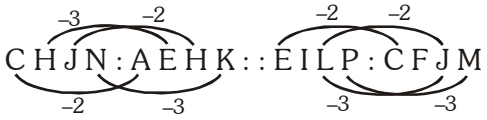
Sol. By observation

Direction : Question 7 to 11 there are four terms/figures in each question. The terms right to the symbol have same relationship as the two terms of the left symbol. Out of the four terms/figure one is missing, which is shown try (?) Four alternative are given for each question. Find out the correct alternative and write its number against the corresponding question on your answer sheet.

7. CHJN : AEHK : EILP : ?

(1) CFJM (2) CGJN (3) BFKM (4) BHLO

Ans. ***(1)***

Sol. 

8. GCAE : 4 : : JEBH : ?

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

Ans. ***(3)***

Sol. Square root of sum of position values

9. 4096 : 8 : : 1296 : ?

(1) 7 (2) 9 (3) 11 (4) 6

Ans. ***(4)***

Sol. Fourth root of 1296 is 6.

10. Drop : Ocean : : Constellation : ?

(1) Shine (2) Sky (3) Light (4) Star

Ans. ***(2)***

Sol. Drop is a part of ocean, constellation is part of sky

11. 6 : 12 : : 9 : ?

(1) 30 (2) 36 (3) 27 (4) 33

Ans. ***(3)***

Sol. $6 : \frac{62}{3} : : 9 : \frac{92}{3} = 27$

Direction : Question 12 to 17 at on number/figure series. In each series term is mentioned by question mark () out the missing term in given laternative write its alternative number agains the question number on your answer she

12. 16, 19, 28, 43, 64, ?

(1) 91 (2) 86 (3) 97 (4) 76

Ans. ***(1)***

Sol. $\underset{+3}{16,}\ \underset{+9}{19,}\ \underset{+15}{28,}\ \underset{+21}{43,}\ \underset{+27}{64,}\ 91$

13. 63, 58, 51, 40, 27, ?

(1) 8 (2) 12 (3) 10 (4) 14

Ans. ***(2)***

Sol. $\underset{-5}{63,}\ \underset{-7}{58,}\ \underset{-11}{51,}\ \underset{-13}{40,}\ \underset{-15}{27,}\ 12$

14. 7, 25, 61, 121, ?

(1) 230 (2) 216 (3) 208 (4) 211

Ans. ***(4)***

Sol. 7, 25, 61, 121, 211
2^3-1 3^3-2 4^3-3 5^3-4 6^3-5

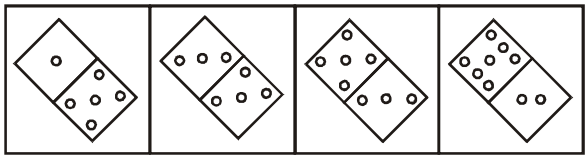
15. 3, 4, 8, 17, 33, 58, ?

(1) 76 (2) 94 (3) 84 (4) 98

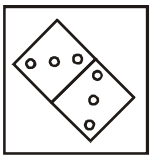
Ans. ***(2)***

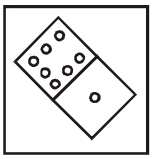
Sol. 3, 4, 8, 17, 33, 58, 94
+1 +4 +9 +16 +25 +36

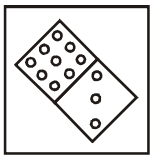
16. Question Figures

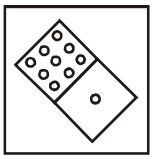


Answer Figures

(1) 

(2) 

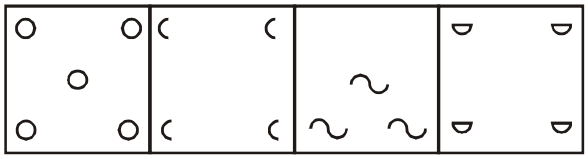
(3) 

(4) 

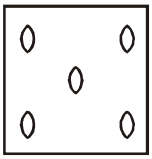
Ans. ***(4)***

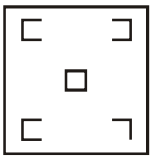
Sol. By observation

17. Queston Figures

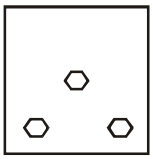


Answer Figures

(1) 

(2) 

(3) 

(4) 

Ans. ***(1)***

Sol. By observation

Direction: Question 18 to 21 the letters in column I are coded in the form of numbers. Which are written in column II, but the order of numbers is different. Read carefully code of letters. Find out correct answer in given alternative and write its alternative number agains the corrsponding question number on your answer sheet.

Column - I	Column - II
CJL	359
EJP	092
PCK	304
KND	478
NEV	721

18. What will be code of KNP

(1) 870 (2) 327 (3) 951 (4) 470

Ans. ***(4)***

Sol. [K-4, N-7, P- 0]

19. What will be code of CJE :

(1) 123 (2) 392 (3) 724 (4) 803

Ans. ***(2)***

Sol. [C-3, J - 9, E-2]

20. What will be code of LJK

(1) 270 (2) 903 (3) 594 (4) 741

Ans. ***(3)***

Sol. [L-5, J-9, K-4]

21. What will be code PVD

(1) 018 (2) 372 (3) 209 (4) 743

Ans. ***(1)***

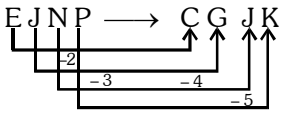
Sol. [P-0, V-1, D-8]

22. If in certain code lanage EJNP is written as CGJK. What will be code of CHLR in same language.

(1) ADHN (2) BEJM (3) EJIO (4) AEHM

Ans. ***(4)***

Sol.



23. If in certain code language GLRT is written as 14. What will be code CHNS in same language.

(1) 13 (2) 11 (3)17 (4) 19

Ans. ***(3)***

Sol. G L R T

7 12 18 20

5 + 6 + 2 = 13 + 1 = 14

C H N S

3 8 14 19

5 + 6 + 5 = 16 + 1 = 17

Direction : Question 24 to 28 are based on definite series. In given question some symbols are missing shown by (–). The missing symbols are given in proper sequence as one of the four alternatives given under each question. Find out the correct alternative and write number on the answer sheet against the question number

24. _CP_D_P_DC_I

(1) D I C I P (2) E I C P D (3) I D P C O (4) P C I D C

Ans. ***(1)***

Sol. [D C P I repeat continuously]

25. _ _ J _ V _ JW _ U _ _

(1) W U V U V U J (2) V W U V W U J (3) V U W U V J W (4) J V U V J V J

Ans. ***(3)***

Sol. [V U T W repeat continuously]

26. _ _ J _ F_ JM _ SJ _

(1) S F M S F S (2) F S M S F M (3) M F S S F M (4) F M S M S F

Ans. ***(2)***

Sol. [F S T M repeat continuously]

27. _ _K_ E_ K X _ P _ X

(1) P E X E P K (2) P K E X E K (3) K E P E X K (4) E P X P E K

Ans. (4)

Sol. [E P K X repeat continuously]

28. _ F S_ G _ S_ GF_ L

(1) G L F L S (2) L G F L S (3) S G L F L (4) F L G S F

Ans. ***(1)***

Sol. [G F S L repeat continuously]

29. Which subject opted by the most

(1) Sanskrit (2) Science (3) Hindi (4) English

Ans. ***(3)***

Sol. All the persons choose Hindi Subject.

30. Which subject opted by the least student.

(1) Science (2) mathemetic (3) English (4) Sanskrit

Ans. ***(2)***

Sol. Only one Ganesh

31. How many student opted Sansktrit subject.

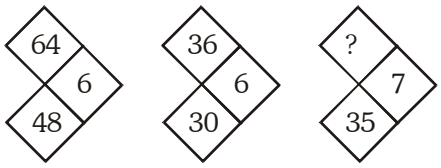
(1) 2 (2) 4 (3) 5 (4) 3

Ans. ***(4)***

Sol. Dinesh, Neeta, Geeta

Direction : In question 32 to 36 number are placed in figure on the basis of some rules. One place is vacant which is indicated as (?). Find out the correct alternative for the vacant place and write its number against the proper question number on your answersheet.

32.

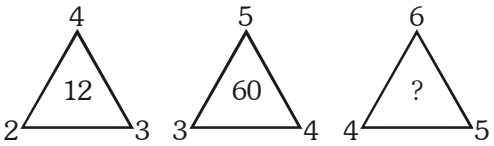


(1) 36 (2) 25 (3) 49 (4) 18

Ans. ***(2)***

Sol. $35 \div 7 = 5 = 5^2 = 25$

33.

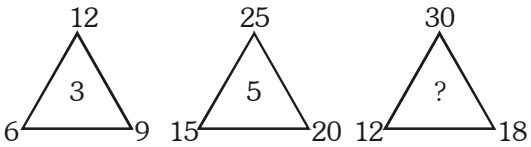


(1) 72 (2) 48 (3) 15 (4) 60

Ans. ***(4)***

Sol. 60 LCM of 6,4,5 = 60

34.

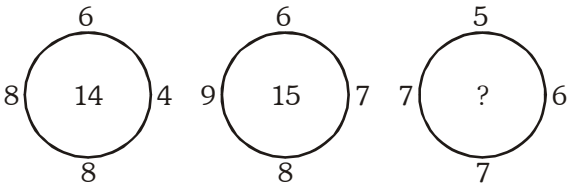


(1) 8 (2) 2 (3) 6 (4) 15

Ans. ***(3)***

Sol. HCF of 30,12,18 = 6

35.

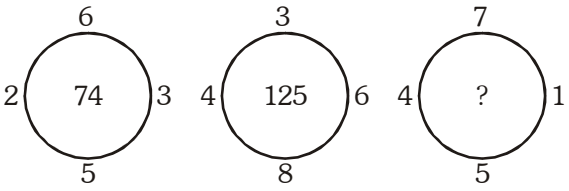


(1) 7 (2) 9 (3) 11 (4) 13

Ans. ***(1)***

Sol. $(7 \times 6) - (5 \times 7) = 42 - 35 = 7$

36.



(1) 94 (2) 91 (3) 86 (4) 90

Ans. ***(2)***

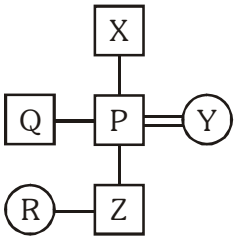
Sol. $2^2 + 6^2 + 3^2 + 5^2 = 4 + 36 + 9 + 25$

$= 40 + 34 = 74$

Solve : $4^2 + 3^2 + 6^2 + 8^2 = 125$

Similarly $4^2 + 7^2 + 1^2 + 5^2 = 16 + 49 + 1 + 25 = 65 + 26 = 91$

Direction : The following question from 37 to 41 are based on the information given below. Read the information carefully and find out the correct answer from the four alternative and write its alternative number on your answer sheet against the proper question number. There are six person P, Q, R, X, Y and Z. R is the sister of Z, Q is the brother of y's husband X is the father of P and grand father of Z. There are two fathers three brothers and a mother in the group



37. Who is y's husband

(1) Q (2) P (3) X (4) Y

Ans. ***(2)***

Sol. P

38. Who is the mother

(1) X (2) Q (3) P (4) Y

Ans. ***(4)***

Sol. Y

39. How many male members are there in the group

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

Ans. ***(3)***

Sol. 4

40. Which of the following is group of brothers

(1) P Q X (2) P Q Z (3) Q Z R (4) Q X Z

Ans. ***(2)***

Sol. P Q Z

41. How is Z related to Y

(1) Son (2) Uncle (3) Daughter (4) Husband

Ans. ***(1)***

Sol. Son

42. $16 = 8 + 2 \times 3 \div 7$

(1) $\times + \div =$ (2) $\div \times + =$ (3) $\times \div + =$ (4) $\div + = \times$

Ans. (2)

Sol. $16 = 8 + 2 \times 3 \div 7$

Option (2) $\div \times + =$

$16 \div 8 \times 2 + 3 = 7$

$2 \times 2 + 3 = 7$

$7 = 7$

43. $12 - 6 = 2 + 3 \div 1$

(1) $+ - + =$ (2) $- + + =$ (3) $\div + - =$ (4) $- = + \times$

Ans. ***(3)***

Sol. $12 - 6 = 2 + 3 \div 1$

option (3) $12 \div 6 + 2 - 3 = 1$

$2 + 2 - 3 = 1$

$1 = 1$

44. $2 + 4 - 6 \times 4 = 10$

(1) $\times + - =$ (2) $- + \div =$ (3) $\div + - =$ (4) $+ \div - =$

Ans. ***(1)***

Sol. $2 + 4 - 6 \times 4 = 10$

Option $\times 4 + 6 - 4 = 10$

$8 + 6 - 4 = 10$

$10 = 10$

45. $15 = 5 + 2 \times 1 \div 7$

(1) $\times \div + =$ (2) $+ \times \div =$ (3) $+ \div = \times$ (4) $\div \times + =$

Ans. ***(4)***

Sol. $15 = 5 + 2 \times 1 \div 7$

Option (4) $\div \times + =$

$15 \div 5 \times 2 + 1 = 7$

$3 \times 2 + 1 = 7$

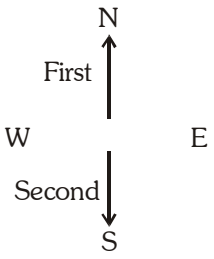
$7 = 7$

46. Two person are sitting back to back. If the first person face is towards north. In which direction will be right hand of the second person.

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

Ans. ***(3)***

Sol.

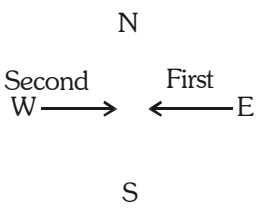


47. Two person are working facing one-another if the face of the first person is towards the west. In which direction will be the right hand of the second person.

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

Ans. ***(1)***

Sol.



Direction : Read the following statement carefully and answer the question no 48 and 49. Write the correct alternative number on you answer sheet

Ramu, Ganesh, Satish, Umesh and Ramesh are five brothers Ganesh is 6 year younger to Ramu and 5 years to Ramesh, Ramu was born in 1985, Ramu is 4 year younger to Satish and 3 year elder to Umesh.

Satish	1989
Ramu	1985
Umesh	1988
Ganesh	1991
Ramesh	1996

48. Who is eldest among five brothers

(1) Ramesh (2) Satish (3) Ganesh (4) Umesh

Ans. ***(2)***

Sol. Satish

49. Who is youngest among five brothers

(1) Ramesh (2) Umesh (3) Ganesh (4) Ramu

Ans. ***(3)***

Sol. Ganesh

50. A person earn two rupees on the first day. If he earns daoble every next day. What will be his earning at the 11th day

(1) 1976 (2) 2056 (3) 1850 (4) 2048

Ans. ***(4)***

Sol. $2^1 + 2^2 + 2^3 + \ldots\ldots\ldots 2^{11} = 2048$