TM

## NATIONAL TALENT SEARCH EXAMINATION <br> (NTSE-2018) STAGE -1 <br> STATE : UTTRAKHAND PAPER: MAT

Date: 05/11/2017

Max. Marks: 50

## SOLUTIONS

Time allowed: 45 mins

Direction (Q.1-5) : In the following questions four items are given, out of these, three of them are alike in a certain way but one is different. Find the different item-

1. (A) 4307
(B) 4009
(C) 5308
(D) 5106

Ans. (B)
Sol. Sum of digits one odd
2. (A) $\mathrm{ABC}=2$
(B) $\mathrm{DCB}=23$
(C) $\mathrm{CAB}=7$
(D) $\mathrm{BEC}=26$

Ans. 0
Sol. T
3. (A) Bake
(B) Peel
(C) Fry
(D) Boil

Ans. (B)
Sol. All reqre cooking
4. (A) Silk
(B) Wool
(C) Leather
(D) Rubber

Ans. (D)
Sol. All are animal product
5.
(A)

(B)

(C)

(D)


Ans. (C)
Sol. By observation
6. If the following alphabets are written in reverse order A B C D EF G HIJKLMNOPQRSTUVWXYZ then which alphabet will be the fourth letter to the left of the fifteenth letter from the right?
(A) T
(B) S
(C) R
(D) B

Ans. (B)
Sol. ZYXWVUTSRQPONMLKJIHGFEDCBA
Directions (Q. 7 \& 8) : Complete the given series
7. MES, LDR, KCQ, ?, IAO
(A) KCO
(B) KBP
(C) JCQ
(D) JBP

Ans. (B)
Sol. $1^{\text {st }}$ letter - 2
$2^{\text {nd }}$ letter - 1
$3^{\text {rd }}$ letter - 1
8. 240, ?, $120,40,10,2$
(A) 180
(B) 240
(C) 420
(D) 480

Ans. (B)
Sol. $\div 1, \div 2, \div 3, \div 4, \div 5$
9. In the given question a series of figures given which is based on some logic. Find the logic and choose the correct option from the given alternatives.

(A)

(B)

(C)

(D)


Ans. (D)
Sol. By observation
10. In the given series one number is incorrect. Find out the incorrect number.
$112,114,120,124,132,142,154$
(A) 114
(B) 120
(C) 124
(D) 132

## Ans. (B)

Sol. $+2,+4,+6,+8,+10,+12$
11. Study the series of given figures and select the appropriate figure from answer figures that will complete the question figure series.
Problem figure

(1)

(2)

(3)

(4)

(5)
(A)

(B)

(C)

(D)


Ans. (D)

## Sol. By observation

Direction (Q.12-16) : In the following questions there is a relationship between the two word/letters/number and figures, given to the left of the proportionality (::) sign. The same relationship exists between the words/letters/ numbers/figures given to the right of the sign (::) of which one is missing. Find the missing one from the given alternatives.
12. BYW : DUX :: FQY :?
(A) GMZ
(B) HMV
(C) GNA
(D) HMZ

Ans. (D)
Sol.

13. January : 12 : : March :?
(A) 8
(B) 10
(C) 5
(D) 13

Ans. (B)
Sol. Number of leters +5
14. 1331 : 11 : : ? : 7
(A) 424
(B) 343
(C) 127
(D) 144

Ans. (B)
Sol. $\quad 11^{3}=1331$
$7^{3}=343$
15. $3: 10:: 8:$ ?
(A) 10
(B) 13
(C) 17
(D) 14

Ans. (C)
Sol. 3 : 10 :: 8 : 17
$2^{2}-1 \quad 3^{2}+1 \quad 3^{2}-1 \quad 4^{2}+1$
16. Car: Garage : : Aeroplane :?
(A) Hanger
(B) Harbour
(C) Port
(D) Depot

Ans. (A)
Sol. Car is parked at Garage aeroplane is parked at Hanga.
17. Problem figure


Answer figure
(A)

(B)

(C)

(D)


Ans. (D)
Sol. By observation
18. If DOCTOR is coded as 36 , then how will PATIENT be coded as
(A) 40
(B) 49
(C) 81
(D) 50

Ans. (B)
Sol. Square of number of letters.
19. If 5th January 2001 was Sunday then which day will fall on 6th April 2001?
(A) Sunday
(B) Monday
(C) Tuesday
(D) Wednesday

Ans. (A)
Sol. Number of odd days $=26+0+3+6=35=0$
6th April 2001 = Sunday
20. If you want to reach the solution in the given equation then which of the following option will be most appropriate out of given alternatives?
$12348=0$
(A),-+ and +
(B) $\div,+$ and $\div$
(C) -, - and -
(D) $\div$, + and -

Ans. (D)
Sol. $12 \div 3+4-8=0$
21. Jatin goes 14 km towards west and then he goes 3 km towards south. Then he again goes 10 km towards east. How far is he now from his starting point?
(A) 12 km
(B) 10 km
(C) 15 km
(D) 5 km

Ans. (D)
Sol.

$\mathrm{OC}=\sqrt{4^{2}+3^{2}}=5$
22. Which of the following figure represents Human, Teacher and Graduates.
(A)

(B)

(C)

(D) None of these

## Ans. (C)

Sol.

23. $A$ is the son of $B$. $C$ is wife of $A$. $E$ is daughter of $C$. How is $E$ related to $B$ ?
(A) Grand Daughter
(B) Grand son
(C) Son
(D) Daughter

Ans. (A)
Sol. B

$E$ is grand daughter of $B$.
24. Five girls are sitting in a row. Pratima is to the right of Mona. Nidhi is to the left of Mona, but is to the right of Natasha. Pratima is to the left of Anu. The girl sitting on the extreme left is
(A) Anu
(B) Natasha
(C) Pratima
(D) Nidhi

Ans. (B)
Sol. Natasha, Nidhi, Mona, Pratima, Anu
25. Given below a dice whose six sides have been coloured with different colours.


Study the given situation and find out which colour will be opposit to blue colour?
(A) White
(B) Red
(C) Yellow
(D) Green

Ans. (A)
Sol.

26. Problem figure


Answer figure
(A)

(B)

(C)

(D)


Ans. (D)
Sol. By observation
27. In which answer figure the problem figure is hidden :

Problem figure.


Answer figure
(A)

(B)

(C)

(D)


## Ans. (A)

Sol. By observation.
28. One evening before sunset, two friends sumit and Mohit were talking to each other face to face. If Mohit's shadow was falling exactly to his right side, which direction was Sumit facing?
(A) North
(B) South
(C) East
(D) West

Ans. (B)
Sol. In evening Sun's direction is at west.
$\therefore$ Shadow is towards east
$\therefore$ Mohit is facing North Sumit facing South.
29. If 'Tee see pee' means 'Drink Fruit Juice' and 'see kee lee', means 'Juice is sweet' and 'lee ree mee' means 'He is intelligent' then what will be the meaning of 'sweet' in that code language?
(A) see
(B) kee
(C) tee
(D) pee

Ans. (B)
Sol. Juice - see
is - lee
Sweet - Kee
30. Problem figure


Answer figure
(A)

(B)

(C)

(D)


## Ans. (B)

Sol. By observation
31. Which number represents the owners who are neither engineers nor good administrators?
$\mathrm{F}=$ Good administrators
$E=$ Engineers
$G=$ Owners

(A) 4
(B) 6
(C) 2
(D) 7

Ans. (C)
Sol. By observation
32. Statement-I : All dogs are foxes.

Statement-II : All foxes are tigers.
Conclusion-I : All dogs are tigers.
Conclusion-II : Some foxes are dogs.
(A) Only I follows
(B) Only II follows
(C) Both I and II follows
(D) Neither I nor II follows

Ans. (C)
Sol.

33. Choose the figure from the given answer figures which will be formed by folding punching and opening the page.

Problem figure


Answer figure
(A)

| 8 | 0 |  |
| :--- | :--- | :--- |
| 0 | 8 | 0 |

(B)

(C)

(D)


## Ans. (B)

Sol. By observation
Direction (34-38) : Observe the mutual relationship between the numbers/figures in the matrix and find out the number/figures that will come in place of question mark (?).
34.


(A) 3
(B) 4
(C) 5
(D) 6

Ans. (C)
Sol. $9 \times(2+1)=27$
$7 \times(3+2)=35$
$4 \times(4+x)=36$
35.

(A) 4
(B) 16
(C) 25
(D) 36

Ans. (D)
Sol. Sum of square root of outer numbers
36.

| 13 | 20 | 27 |
| :---: | :---: | :---: |
| 17 | $?$ | 33 |
| 9 | 10 | 11 |

(A) 28
(B) 25
(C) 24
(D) 21

Ans. (B)
Sol. $\frac{13+27}{2}=20$
$\frac{9+11}{2}=10$
$\frac{17+33}{2}=25$
37.

(A)

(B)

(C) $\stackrel{12}{10}$
(D)


## Ans. (D)

Sol. alternate $+1,-1$
38.

(A)

(B)

(C)

(D)


Ans. (D)
Sol. By observation
39. Choose the correct water image of problem figure from the options given in the answer figures.

Problem figure


Answer figure
(A)

(B)

(C)

(D)


## Ans. (B)

Sol. By observation
40. If P denotes,+ Q denotes,- R denotes X and S denotes $\div$ then which of the following equation is correct.
(A) $36 \mathrm{R} 4 \mathrm{~S} 8 \mathrm{Q} 7 \mathrm{P} 4=10$
(B) 16 R 12 P 49 S 7 Q $9=200$
(C) 32 S 8 R 9 Q 12 R $12=160$
(D) 8 R 8 P 8 S 8 Q $8=57$

Ans. (D)
Sol. $8 \times 8+8 \div 8-8=57$

Direction (Q. 41 to 44) : Study the following information carefully and answer the questions given below.
Five students A, B, C, D and E have five books on subjects Physics, Chemistry, Maths, Biology and English written by Gupta, Khanna, Harish, Sharma and Edwin. Each student has only one book out of the five subjects.

Gupta is the author of physics which is ownes by neither E nor A. D owns the book written by Edwin. C owns the books on maths. E has the book on English which is not written by Khanna. The book on biology is written by Sharma.
41. Who among the following is the author the book on chemistry?
(A) Edwin
(B) Harish
(C) Gupta
(D) Khanna

Ans. (A)
Sol. Edwin
$-44$

|  | A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Book | Biology | Physics | Maths | Chemistry | English |
| Author | Sharma | Gupta | Khanna | Edwin | Harish |

42. Who among the following is the owner of the book written by Harish?
(A) A
(B) B
(C) C
(D) None of these

Ans. (D)
Sol. By observation
43. Who among the following has Biology?
(A) A
(B) B
(C) C
(D) D

Ans. (A)
Sol. By observation
44. Which of the following combinations is correct?
(A) Physics - Gupta - A
(B) Chemistry- Edwin - D
(C) Maths-Harish - C
(D) English-Edwin - E

Ans. (B)
Sol. By observation
45. Two clocks were set in the morning at 10 am on Sunday. One clock loses 3 minutes in an hour while the other gains 2 minutes in an hour. By How main minutes do the two clocks differ in the evening at 4 pm on the same day?
(A) 25 minutes
(B) 20 minutes.
(C) 35 minutes
(D) 30 minutes

Ans. (D)
Sol. In $1 \mathrm{hr}=$ differ $=5 \mathrm{~min}$.
In $6 \mathrm{hr}=\operatorname{diff}=30 \mathrm{~min}$.
46. A bus leaves for Delhi in every 30 minutes from a bus stand. An enquiry clerk told a passenger that the bus had already left 10 minutes ago .uiij die ncxL bub will leave M 9.35 am , Ai what time did the enquiry clerk give information to the passenger?
(A) $9: 10 \mathrm{am}$
(B) $9: 15 \mathrm{am}$
(C) $8: 55 \mathrm{am}$
(D) $8: 08 \mathrm{am}$

Ans. (B)
Sol. $9: 35-30+10=9: 15$
47. There are five different houses $A$ to $E$ in a row. $A$ is to the right of $B$ and $E$ is to the left of $C$ and right of $A$. $B$ is to the right of D . Which house is in the middle?
(A) A
(B) B
(C) C
(D) D

Ans. (A)
Sol. DBAEC
48. A table clock 15 placed on the bable in such a way that the hour hand will point towards north at 6:00 $\mathrm{O}^{\prime}$ clock. In which direction will the minute hand be at 9:15 O' clock?
(A) North
(B) South
(C) East
(D) West

Ans. (D)
Sol.

49. $a_{-} b_{-} a b b_{-} a b a_{-} a_{-} b a$.
(A) bbaab
(B) babba
(C) baaba
(D) aabba

Ans. (C)

Sol. $\quad \mathrm{a} \underline{\mathrm{b}} \mathrm{b} \frac{\mathrm{a}}{\mathrm{d}} \mathrm{abb} \frac{\mathrm{a}}{} \mathrm{ab} \underline{b}$ a a bba.
50. Which of the answer figure is exactly mirror image of the problem figure?

Problem figure


Answer figure
(A)

(B)

(C)

(D)


Ans. (C)
Sol. By observation

