



**NATIONAL TALENT SEARCH EXAMINATION
(NTSE-2019) STAGE -1
STATE : UTTAR PRADESH PAPER : MAT**

Date: 04/11/2018

Max. Marks: 100

SOLUTIONS

Time allowed: 120 mins

Q1. Ans: (4)

Sol: $Q=17$ $M=13$ $U=21$ $N=14$, so only N has even value;

$144 = 1+4+4 = 9$; $54 = 5+4 = 9$; $16 = 1+6 = 7$; $60 = 6+0 = 6$; so no 6 is even value.

Q2. Ans: (2)

Sol: All countries except Korea are European countries.

Q3. Ans: (2)

Sol: All except magnet are form of energy, while magnet is an object.

Q4. Ans: (3)

Sol: $14,9 = (1*4)+(1+4) = 9$

$60,6 = (6*0)+(6+0) = 6$

$37,30 = (3*7)+(3+7) = 31$

$53,23 = (5*3)+(5+3) = 23$

Q5. Ans: (2) or (3)

Sol: For option (2), only july has even number of letters

For option (3), only January has more than one vowels in its word.

Q6. Ans: (2)

Sol: All except 3721 has even sum of digits.

Q7. Ans: (3)

Sol: All except PAC is related with cricket.

Q8. Ans: (2)

Sol: All except MPSV does not have uniform gap in the letters. i.e. MPSV has a uniform gap of two letters.

Q9. Ans: (4)

Sol: All except LORD is not a meaningful word. And all other options have letters in increasing order.

Q10. Ans: (3)

Sol: W, V, & T have vertical symmetry, while K has horizontal symmetry.

Q11. Ans: (1)

Sol: Thermometer is used to measure temperature, in the same way barometer is used to measure atmospheric pressure.

Q12. Ans: (2)

Sol: Root is the base for tree, in the same way foundation is the base for building.

Q13 Ans: (3)

Sol: $c=3$ & $x=24$, so $3*24 = 72$; $G=7$ & $U=21$, so $7*21 = 147$

Q14 Ans: (4)

Sol: Rajghat is the Samadhi of Mahatma Gandhi, and Abhayghat is the Samadhi of Morarji Desai.

Q15 Ans: (4)

Sol: $18^3 = 5832$; $23^2 = 529$

Q16. Ans: (2)

Sol: GHIJ are consecutive letters after CDEF (written in reverse as FEDC); so QRST are consecutive letters after MNOP (written in reverse as PONM)

Q17. Ans: (3)

Sol: $B+4=F$, $H+4=L$, $C+4=G$ (BHC:FLG); $J+4=N$, $P+4=20$, $K+4=O$ (JPK:NT0)

Q18. Ans: (2)

Sol: $5*7*4*8 = 1120$; $2*1*8*6 = 96$

Q19 Ans: (1)

Sol: In option (1), the two lines inside the rectangle are touching the edge.

Q20 Ans: (3)

Sol: All except in option (3), the figure inside the hexagon is a square.

Q21 Ans: (1)

Q22 Ans: (3)

Q23 Ans: (2)

Q24 Ans: (4)

Q25 Ans: (2)

Q26 Ans: (3)

Sol: aabaa/bbabb/aabaa/bbabb

Q27 Ans: (2)

Sol: tsr/str/tsr/str/tsr/st

Q28 Ans: (2)

Sol: KLMK/KLMK/KLMK/KLMK

Q29. Ans: (3)

Sol: ACEG/ACEG/ACEG/ACEG

Q30. Ans: (1)

Sol: CBOF/CBOF/CBOF

Q31. Ans: (3)

Sol: EDRJ/EDRJ/EDRJ

Q32. Ans: (2)

Sol: FESH/FESH/FESH

Q33 Ans: (4)

Sol: FERJ/FERJ/FERJ

Q34. Ans: (2)

Sol: BYLE/BYLE/BYLE

Q35. Ans: (3)

Sol: FRLY/FRLY/FRLY

Q36 Ans: (1)

Sol: $61 \times 2 = 200 - 78$ (i.e. 122)

Q37 Ans: (3)

Sol: $23 + 11 = 102 \div 3$ (i.e. 34)

Q38 Ans: (2)

Sol: $76 \div 2 + 12 = 50$

Q39 Ans: (3)

Sol: $97 - 73 = 144 \div 6$

Q40 Ans: (2)

Sol: $16 \div 8 = 7 \times 2 - 12$

Q41. Ans: (1)

Sol: $27 - 6 = 7 \times 3$

Q42. Ans: (3)

Sol: $85 \times 2 = 95 + 75$

Q43. Ans: (2)

Sol: $108 \div 9 + 9 = 21$

Q44 Ans: (1)

Sol: $66 - 27 = 13 \times 3$

Q45. Ans: (1)

Sol: $4^2 - 3^2 - 1^2 = 6$



Q46. 2 this fig(2) represent the correct relation of Family ,mother and father in which big circle represent the family. So answer is option (1)



Q47. 1 this fig(1) represent the correct relation of books,page and words in which big circle represent the book and smallest represent word. So answer is option (3)



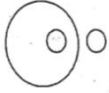
Q48. 2 this fig(2) represent the correct relation of maths,algebra and geometry in which big circle represent maths. So answer is option (1)



Q49. 3 this fig(3) represent the correct relation of maths, hindi and science . So answer is option(1)



Q50. 2 this fig(2) represent the correct relation of House,door, window in which big circle represent house. So answer is option (4)



Q51. 4 this fig(4) represent the correct relation of year, month and weather in which big circle represent year and outer circle represent weather. So answer is option (2)



Q52. 1 this fig(1) represent the correct relation of asia,india and kerala in which big circle represent asia and inner circle is kerala. So answer is option (3)



Q53. 3 this fig(3) represent the correct relation of mahesh bhupati,sangram singh and ajigya rahare . So answer is option(1)



Q54. 1 this fig(1) represent the correct relation of Uttar pradesh, agra and tajmahal in which big circle represent uttar pradesh and inner circle is Tajmahal. So answer is option (3)



Q55, 3 this fig(3) represent the correct relation of Raipur, Ranchi and Patna . So answer is option(1)

Q56. $C + 2 = E$, $F + 3 = I$, $J + 4 = N$, $N + 5 = S$.

$G + 2 = I$, $H + 3 = L$, $O + 4 = S$, $T + 5 = Y$

SO ANSWER will be ILSY which is not in the answers.

Q57. $D - 1 = C$, $G - 2 = E$, $J - 3 = G$, $N - 4 = J$.

$F - 1 = E$, $H - 2 = F$, $O - 3 = L$, $S - 4 = O$

SO ANSWER will be option(4) EFLO.

Q58. $B + 3 = E$, $J + 2 = L$, $M + 3 = P$, $T + 2 = Y$.

$E + 3 = H$, $H + 2 = J$, $L + 3 = O$, $R + 2 = T$ So ANSWER will be option(1) HJOT

Q59. $H+5=M$, $K+4=O$, $O+3=R$, $R+2=T$

$J+5=O$, $L+4=P$, $P+3=S$, $U+2=W$

So ANSWER will be option(3) OPSW

Q60. BREAD = 30

$B=2$, $R=18$, $E=5$, $A=1$, $D=4$ (ALPHABETIC POSITION)

ADD these no. $2+18+5+1+4 = 30$

Similarly $N=14$, $U=21$, $R=18$, $S=19$, $E=5$

ADD these numbers $14+21+18+19+5 = 77$ option(4)

For Q61 to Q65.

As per the data

P and S are unmarried female and do not play any game.

T is male (Given: T is husband of either Q or R)

Q is male and plays football (given : Q is the brother and don't play chess and hockey)

So R is female and wife of T and plays hockey (given : no lady play chess or football and Q plays football).

T play Chess.

Q61. Option (2) Q

Q62. Option (3) R

Q63 Option (1) T

Q64. Option (3) R

Q65. Option (4) P,R,S

Q66. (sum of numbers at corners) $^2 - 1$ $(2+3+4+5)^2 - 1 = 195$ option(2)

Q67. Half of intersecting number and multiply with horizontal number to get the vertical number

$$14/2 \times 12 = 84$$

$$18/2 \times 9 = 81 \quad \mathbf{16/2 \times 11 = 88}$$
 option (1)

Q68. Addition of above numbers and divide by 7 to get the below number

$$(25+17)/7 = 6$$

$$(38+18)/7 = 8$$

$$(89 +16)/7 = 15 \text{ option(2)}$$

Q69. Multiplication of 1st, 2nd and 4th number to get the 3rd number

$$2 \times 3 \times 5 = 30$$

$$6 \times 3 \times -1 = -18 \text{ option(2)}$$

Q70. Sum of square of above number to get the lower number

$$2^2 + 4^2 = 20$$

$$3^2 + 9^2 = 90$$

$$1^2 + 7^2 = 50 \text{ option(3)}$$

Q71. As per the statements provided step by step

Krishan > Gopal

Mohan > girdhar

Gopal > mohan

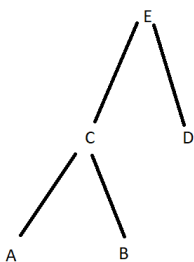
Murli > krishan

Combining all the above

Murli > krishan > gopal > mohan > girdhar

So ans is Option (3) murli(tallest), girdhar(shortest)

Q72. A and B are brother and sister in which A is brother and B is sister, C is the father of A which means C is also the father of B. D is the sister of C and E is the mother of D which means E is also the mother of C. so we can say that B is the grand daughter E. option(1)



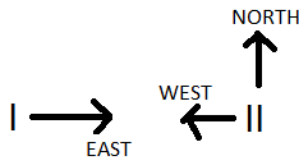
Q73. There are 31 days in oct, which means it has 3 odd days which will be added in next month.

So 1st nov will be 3days ahead of 1st oct. now as per the question 1st oct is Sunday so 1st nov will be wednesday .option(3)

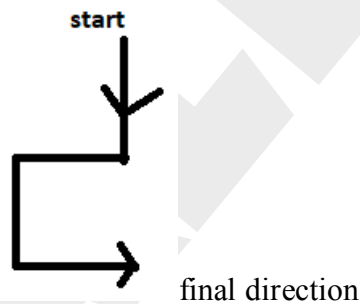
Q74. 27 jan 2004 to 26 feb 2004 , 31 days
26 feb 2004 to 26 mar 2004 , 29 days
26 mar 2004 to 26 apr 2004 , 31 days
26 apr 2004 to 15 may 2004 , 19 days
If we include 26 jan also , 1 more day

Total 111 days,option(2)

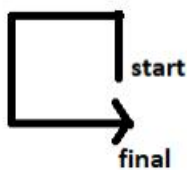
Q75. IF FIRST person is looking towards east it means other is facing west and his right hand will be in **north**. Option(3)



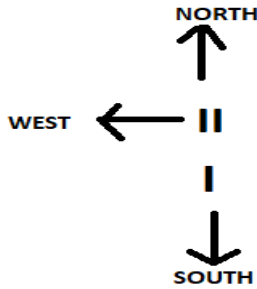
Q76. Option (1) east



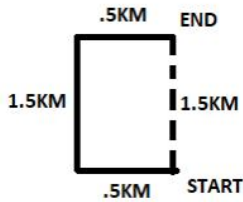
Q77. Option (1) east



Q78. OPTION (2) WEST



Q79.OPTION (3) 1.5 KM

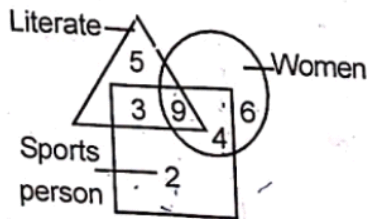


Q80. Pattern is red pink purple yellow white

WHITE will be at 5th , 10th and 15th position, 3rd position after white is purple (18th)

So ans is option(3) purple

For question 81 to 85



Q81. For literate add all in triangle i.e $5+3+9 = 17$ option(2)

Q82. Literate woman triangle intersecting circle 9 option (4)

Q83. Sports women square intersecting circle $9+4=13$ option(3)

Q84. Literate but not women , triangle minus circle , $5+3=8$ option(2)

Q85.sports women not literate, 4 option(3)

Q86. $4.86+5.69+5.12+4.17+4.94+5.04= 29.82$ (sum)

Average = $29.82/6= 4.97$ no option

Q87. Each day this happen 22 time , 11 times per 12 hours, once each hour except 5 to 7 in which it happens just once. so option(4)

Q88. $4C + 2H = 2(C + H) + 14$ - - - - AS PER THE QUESTION (C= COW , H=HEN)

After solving $C = 7$ option (2)

Q89. If we solve them for LCM of denominator we get 120

SO we get $2/3 = 80/120$, $4/5 = 96/120$, $3/8 = 45/120$, $1/2 = 60/120$

If we arrange them ascending order we get $3/8, 1/2, 2/3, 4/5$ option(4)

Q90. $(16)^{3/4}$ is written as $(2)^4 \times 3^{3/4}$, we get 8 option(4)

Q91. Option(3) 1,5,4,2,3 birth, education, marriage, death , funeral

Q92. Option(1) 3,2,4,5,1 disease , doctor, diagnose, medicine, treatment

Q93. Option(3) 2,5,3,1,4 centi,deci, deca, hector,kilo

Q94. Option(1) 5,4,3,1,2 lieutenant general, brigadier, colonel, major ,captain

Q95. N.A, as there is nothing like sail in building and in hindi the word means soil not sail

For question 96 to 100

B > C > D

E > B > A, C

C > A > D

Combining all the above data we get

E > B > C > A > D

Q96. Option(2) D

Q97. Option(3) E

Q98. Option(4) C

Q99. Option(1) B_E

Q100. Option(1) B