



# INTSO EDUCATION

MATHEMATICS TALENT SEARCH OLYMPIAD(MTSO) 2015 - 2016

STAGE - 1

TIME : 60 min.

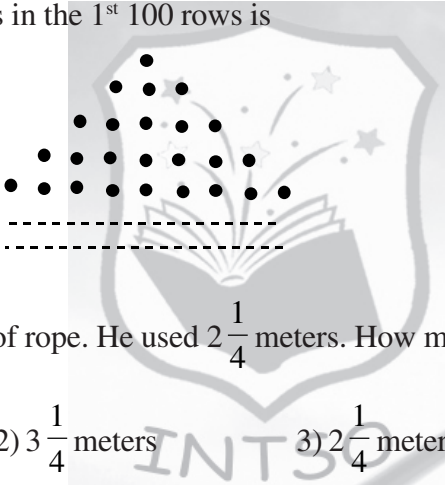
CLASS : IV

Max. Marks : 50

### Instructions:

- ⇒ Fill the OMR sheet completely and carefully.
- ⇒ Each question carries one mark and has only one correct answer. No negative marks.
- ⇒ The question paper contains 50 questions to be answered in 60 minutes.

1. What is the remainder when 1525 is divided with 100 [ ]  
1) 15                      2) 125                      3) 25                      4) 5
2. What is the Quotient when 98765 is divided with 1000 [ ]  
1) 8                      2) 9                      3) 98                      4) 765
3. What is the largest number formed by using the given digits 9,6,8,0 [ ]  
1) 9860                      2) 8690                      3) 6980                      4) 968
4. The number which is 299 less than 36,988 is [ ]  
1) 36,680                      2) 36,689                      3) 36,679                      4) 36,769
5. The population of a village is 1,46,400. If 44,652 are women and 53,340 are men and the rest are children then number of children in the village is [ ]  
1) 48,000                      2) 48,400                      3) 48,408                      4) 49,000
6. If a number is divisible by 2 and 3 then the number is always divisible by [ ]  
1) 7                      2) 6                      3) 8                      4) 9
7. The number of two digit numbers of the form 'aa' with same digit 'a' having exactly four divisors is [ ]  
1) 2                      2) 4                      3) 6                      4) 8
8. What is the remainder when 97,695 is divided with 5 [ ]  
1) 0                      2) 4                      3) 3                      4) 2
9. Nandita pays ₹78,000 as rent for her flat in one year then the monthly rent she has to pay is [ ]  
1) ₹6,000                      2) ₹6,400                      3) ₹6,500                      4) ₹ 7,000
10. If a,b are relatively Prime numbers and the L.C.M is 72 then ab = ? [ ]  
1) 144                      2) 72                      3) 60                      4) 1
11. Sum of the factors of 28 is [ ]  
1) 28                      2) 56                      3) 112                      4) 42
12. Sum of the digits of a number  $10^{99} - 99$  [ ]  
1) 874                      2) 99                      3) 774                      4) 0
13. A number has two factors '1' and itself only then the number is called [ ]  
1) composite number    2) even number                      3) odd number                      4) prime number
14. How many prime numbers are there from 1 to 100 [ ]  
1) 20                      2) 50                      3) 25                      4) 22
15. The great Mathematician Eratosthenes belongs to which country [ ]  
1) Egypt                      2) Italy                      3) America                      4) Greece

16. The H.C.F of 456 and 360 is [ ]  
 1) 22                                      2) 24                                      3) 20                                      4) 25
17. The L.C.M of  $\frac{3}{8}, \frac{4}{9}, \frac{6}{7}$  [ ]  
 1)  $\frac{12}{1}$                                       2)  $\frac{24}{9}$                                       3)  $\frac{22}{7}$                                       4)  $\frac{72}{7}$
18. The equivalent fraction of  $\frac{3}{8}$  is [ ]  
 1)  $\frac{9}{25}$                                       2)  $\frac{27}{16}$                                       3)  $\frac{9}{24}$                                       4)  $\frac{12}{40}$
19. A fraction whose numerator is '1' is called [ ]  
 1) like fraction                              2) mixed fraction                              3) unlike fraction                              4) unit fraction
20. If a number x is divided with y, we get the Quotient a and remainder 'b' then [ ]  
 1)  $x = ab + y$                               2)  $x = ay + b$                               3)  $y = ax + b$                               4)  $y = bx + a$
21. The total number of dots in the 1<sup>st</sup> 100 rows is [ ]  
 1) 550  
 2) 560  
 3) 5500  
 4) 10000
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22. Hari bought  $4\frac{1}{2}$  meters of rope. He used  $2\frac{1}{4}$  meters. How much rope is left with Hari ? [ ]  
 1)  $4\frac{1}{2}$  meters                              2)  $3\frac{1}{4}$  meters                              3)  $2\frac{1}{4}$  meters                              4)  $2\frac{1}{2}$  meters
23. The decimal form of  $4\frac{623}{1000}$  is [ ]  
 1) 46.23                                      2) 462.3                                      3) 0.4623                                      4) 4.623
24. Rishita purchased a pencil for ₹10.75 an eraser of ₹2.50 and a note book costing ₹25.75 then the total amount spend by her. [ ]  
 1) ₹ 40                                      2) ₹42                                      3) ₹39                                      4) ₹37
25. How many litres are equal to 1 milli litre. [ ]  
 1) 1000l                                      2) 100l                                      3)  $\frac{1}{1000}$  l                                      4)  $\frac{1}{100}$  l
26. One kilogram is equal to How many grams. [ ]  
 1) 100grams                                      2) 1000 grams                                      3) 0.001grams                                      4) 0.01 grams
27. Raj sold his car which he bought for ₹2,00,000 at a loss ₹23,450 then the selling price is [ ]  
 1) 1,76,000                                      2) 1,75,500                                      3) 1,76,550                                      4) 1,77,000

28. What is the angle between the two hands of a clock at 2 -30 ? [ ]  
 1)  $100^\circ$                       2)  $105^\circ$                       3)  $120^\circ$                       4)  $110^\circ$
29. Convert 23 : 10 hours into 12 hour clock time [ ]  
 1) 11.P.M                      2) 11.10 P.M                      3) 11.A.M                      4) 11.10A.M
30. 5 months 25 days equal to how many days [ ]  
 1) 150 days                      2) 180 days                      3) 185 days                      4) 175 days
31. 3600 seconds is equal to how many minutes [ ]  
 1) 60 minutes                      2) 36 minutes                      3) 30 minutes                      4) 10 minutes
32. In a leap year February month has how many days? [ ]  
 1) 30                      2) 31                      3) 29                      4) 28
33. How many days are there from 25th March to 6th. May (including both days) [ ]  
 1) 40 days                      2) 33 days                      3) 43 days                      4) 41 days
34. A man travelled 84 k.m 523m by car and 26km 990M , by bus . What is the total distance covered [ ]  
 1) 111 km                      2) 111 km 513m                      3) 110 km 500m                      4) 111 km 700m
35. If  $a * b = 2a + 2b - ab$  a,b are any two numbers if  $3 * x = 4$  then x is [ ]  
 1) 4                      2) 3                      3) 2                      4) 5
36. The number of two digited prime numbers less than 100 whose sum of the digits 2 is [ ]  
 1) 1                      2) 2                      3) 3                      4) 4
37. If 5 lines are drawn in the plane the maximum number of regions into which the plane is divided is [ ]  
 1) 10                      2) 12                      3) 14                      4) 16
38. Ajay bought 5kg of sweets and distributed 2kg 300g sweets to some poor children. How much of sweets was left with him [ ]  
 1) 3kg 700grams                      2) 1kg 700grams  
 3) 2kg 700grams                      4) 3kg 200 grams
39. The sides of a rectangle are 16cm and 8 cm then the perimeter of the rectangle is [ ]  
 1) 24cm                      2) 40cm                      3) 48cm                      4) 72cm
40. The area of the square whose side is 6cm [ ]  
 1)  $24\text{cm}^2$                       2)  $20\text{cm}^2$                       3)  $36\text{cm}^2$                       4)  $12\text{cm}^2$
41. A figure bounded by '6' line segments is called [ ]  
 1) quadrilateral                      2) hexagon                      3) pentagon                      4) octagon
42. There are 20 cities in a certain country. Every pair of cities is connected by air route. How many air routes are there [ ]  
 1) 19                      2) 380                      3) 190                      4) 40
43. The area of the circle with radius 7cm is [ ]  
 1)  $144\text{ cm}^2$                       2)  $124\text{cm}^2$                       3)  $150\text{ cm}^2$                       4)  $154\text{cm}^2$
44. The figure formed by joining mid points of a Rhombus is [ ]  
 1) Rhombus                      2) Square                      3) Kite                      4) Rectangle
45. The area of regular hexagon with side a units is [ ]  
 1)  $\frac{\sqrt{3}}{4} a^2$  sq.units                      2)  $\frac{\sqrt{3}}{2} a^2$  sq.units                      3)  $6 \frac{\sqrt{3}}{4} a^2$  sq.units                      4)  $5 \frac{\sqrt{3}}{4} a^2$  sq.units

46. If in a quadrilateral all sides are equal then it is [   ]  
1) square                      2) Rectangle                      3) Kite                      4) pentagon
47. The number of 3 digits even numbers that can be written using the digits 0,3,6 without repetition is [   ]  
1) 6                      2) 3                      3) 4                      4) 2
48. How many two digit numbers greater than 10 are there which are divisible by 2 and 5 but not by 4 or 25 [   ]  
1) 2                      2) 4                      3) 3                      4) 5
49. The sum of the reciprocals of all the divisors of 6 is [   ]  
1) 1                      2) 2                      3) 3                      4) 6
50. If  $(a-1)^2 + (b-2)^2 + (c-3)^2 + (d-4)^2 = 0$  then  $a \times b \times c \times d + 1$  is [   ]  
1) 20                      2) 10                      3) 24                      4) 25

