INTSO EDUCATION

MATHEMATICS TALENT SEARCH OLYMPIAD(MTSO) 2015 - 2016

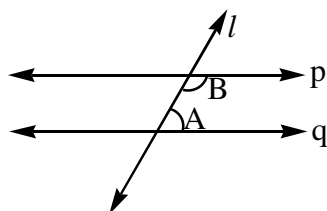|		
	STAGE - 2	TIME : 60 min.
CLASS : V		Max. Marks : 50

Instructions:

⇨ *Fill the OMR sheet completely and carefully.*

⇨ *Each question carries one mark and has only one correct answer. ¼ (one fourth) marks will be deducted for indicating incorrect response of each question.*

⇨ *The question paper contains 50 questions to be answered in 60 minutes.*

1. Number of lines of symmetry of a square has   [   ]
   1) 4   2) 5   3) 3   4) 2

2. Number of lines of symmetry of a regular pentagon has   [   ]
   1) 4   2) 3   3) 2   4) 5

3. The great mathematical genies shakumtala devi was born in the year   [   ]
   1) 1929   2) 1927   3) 1935   4) 1920

4. In a million one is followed by how many zeroes   [   ]
   1) 5   2) 6   3) 7   4) 8

5. The largest 8 digits number with the following digits 7, 8, 5, 4, 1, 2, 0, 5 is   [   ]
   1) 87554210   2) 78554210   3) 87545120   4) 87455120

6. In Indian system the place value of the underline digit in $\overline{7}653875$ [   ]
   1) seventy thousand   2) seven lakhs   3) seventy lakhs   4) 7 crores

7. Hindu Arabic numeral value of MMCCL is   [   ]
   1) 2000   2) 2250   3) 2200   4) 2050

8. The Roman numeral value of 3249 is   [   ]
   1) MMMCCXLIX   2) MMMCCLIXX   3) MMMCLCIXX   4) MMCMLCIXX

9. Number of crores are there in hundred millions   [   ]
   1) 1   2) 10   3) 100   4) 1000

10. In an election there were three candidates A, B and C. Candidate A got 5,65,68,496 votes and B got 6,68,35,608 votes . The total number of votes was 22,36,50,608, then the winner of the election is   [   ]
    1) A   2) B   3) C   4) none

11. The number of pairs of twin primes below 100 is   [   ]
    1) 9   2) 8   3) 12   4) 16

12. The product of divisors of 1040 is   [   ]
    1) $(1040)^{15}$ 2) $(1040)^{10}$ 3) $(1040)^{20}$ 4) $(1040)^{40}$

13. Among the following a prime number   [   ]
    1) 91   2) 41   3) 81   4) 51

14. One box of pencils costs Rs. 18. The cost of 14,919 boxes of pencils is   [   ]
    1) Rs. 2,68,500   2) Rs. 2,68,542   3) Rs. 2,68,400   4) Rs. 2,60,542

15. The remainder when 66,69,987 is divided by 100 is   [   ]
   1) 987   2) 7   3) 87   4) 187

16. 68 people can travel in one bus, number of buses will be needed for 1904 people going on a pilligrimage   [   ]
   1) 20   2) 26   3) 28   4) 22

17. The least number that should be added to 36,516 so that the result is exactly divisible by 456
   1) 400   2) 36   3) 420   4) 450   [   ]

18. The value of 2[13 +{12 + 11(10 − 8)}] is   [   ]
   1) 74   2) 84   3) 94   4) 104

19. A train travels 35 km in the first hour, 30 km in the second hour, 50 km in the 3rd hour and 45 km in the fourth hour the average speed of the train per hour is   [   ]
   1) 30 km per hour   2) 40 km per hour   3) 35 km per hour   4) 45 km per hour

20. The average of first 10 counting numbers is   [   ]
   1) 5   2) 5.5   3) 6   4) 10

21. 6 men finish the constructing a house in 30 days. Number of days will the house be constructed if 9 men are employed   [   ]
   1) 30 days   2) 15 days   3) 20 days   4) 10 days

22. 8 persons take 12 days to dig well. Number of days will 12 persons take to dig 2 wells [   ]
   1) 8 days   2) 24 days   3) 16 days   4) 18 days

23. The H.C.F of 762 and 1270 is   [   ]
   1) 762   2) 154   3) 252   4) 254

24. The L.C.M of 144,96,160 is   [   ]
   1) 440   2) 320   3) 1240   4) 1440

25. The smallest number which when divided by 44 and 55 leaves a remainder of 8   [   ]
   1) 220   2) 168   3) 228   4) 238

26. The number 6702x is divisible by 4, then the least digit to replace 'x' is   [   ]
   1) 1   2) 2   3) 0   4) 3

27. The H.C.F of $\dfrac{2}{7}, \dfrac{3}{14}, \dfrac{5}{3}$ is   [   ]

   1) 45   2) $\dfrac{1}{42}$ 3) $\dfrac{1}{41}$ 4) $\dfrac{1}{30}$

28. The L.C.M and H.C.F of two fractions are $\dfrac{84}{5}$ and $\dfrac{4}{75}$. If one of the fractions is $\dfrac{12}{25}$. The other fraction is   [   ]

   1) $\dfrac{7}{3}$ 2) $\dfrac{3}{5}$ 3) $\dfrac{28}{15}$ 4) $\dfrac{84}{75}$

29. Rishita has a rope $5\dfrac{1}{4}$ m. He cuts off one - third of it. How long is the portion she cut off

   1) $\dfrac{7}{4}$ m   2) $\dfrac{6}{5}$ m   3) $\dfrac{8}{3}$ m   4) $\dfrac{7}{3}$ m   [   ]

30. The cost of $3\frac{1}{2}$ kg of sweets is Rs. $185\frac{1}{2}$, the cost of 1 kg of sweets is   [   ]

1) Rs. 63   2) Rs. 53   3) Rs. 43   4) Rs. 54

31. Which of following are like decimals   [   ]
1) 7.01, 18.34   2) 16.325, 0.1605   3) 7.01, 8.1   4) 5.03, 5.33

32. The value of $\sqrt{\dfrac{81}{64}\sqrt{\dfrac{81}{64}\sqrt{\dfrac{81}{64}.......\infty}}} =$ [   ]

1) $\dfrac{81}{64}$ 2) $\dfrac{9}{8}$ 3) $\dfrac{81}{8}$ 4) $\dfrac{1}{64}$

33. A shopkeeper has Rs. 50.48 in his cash box, when the sales began. At the end of the day he had Rs. 200.60. How much did he sell that day is   [   ]
1) Rs. 150   2) Rs 150.12   3) Rs 148.12   4) Rs. 138.12

34. The product of 15.8 and 1.32 is   [   ]
1) 20.656   2) 20.856   3) 18.856   4) 21.856

35. Nandita bought 15.5 liters of vegetable oil for Rs. 483.60. The cost of 1 liter of vegetable oil is
1) Rs. 30.2   2) Rs. 31.2   3) Rs. 29.2   4) Rs. 32.2   [   ]

36. The product of 35 kg 455g and 12 is   [   ]
1) 425 kg   2) 400.25 kg   3) 425.4 kg   4) 425.46 kg

37. The temperature of a cup of hot milk was 149ºF. The celsius scale of this temperature is
1) 60^C 2) 62^{oC} 3) 61^{oC} 4) 65^{oC} [   ]

38. The name of the polygon with 7 sides is called   [   ]
1) hexagon   2) Heptagon   3) Octagon   4) pentagon

39. The number of diagonals of a novagon is   [   ]
1) 54   2) 27   3) 36   4) 48

40. The name of the triangle in which one angle is 110º   [   ]
1) acute angled triangle   2) obtuse angled triangle
3) right angled triangle   4) equilateral angled triangle

41. The diameter of circle with circumference 6.28cm is   [   ]
1) 3 cm   2) 3.2 cm   3) 2.2 cm   4) 2cm

42. The figure formed by the internal angular bisectors of parallelogram is   [   ]
1) rectangle   2) square   3) parallelogram   4) rhombus

43. The angle subtended between two parallel lines is   [   ]
1) 0º   2) 1º   3) 2º   4) 3º

44. In the following figure parallel lines p and q are intersected by transversal '*l*' if $\angle A = 120º$ then $\angle B$ equal to   [   ]

1) 120º

2) 60º

3) 30º

4) 100º

45. The length and breadth of a rectangle are 1.5m and 30 cm then its area is   [   ]
    1) 4500 sq. cm   2) 450 sq. cm   3) 45 sq. m   4) 4.5 sq. m

46. 10% of 25% is what percent of 12.5% of 40% is   [   ]
    1) 100%   2) 25%   3) 50%   4) 70%

47. x, y, z are three sums of money such that Y is the simple interest on x and z is simple interest on y
    for the same time and rate then   [   ]
    1) $x^2 = yz$ 2) $y^2 = xz$ 3) $z^2 = xy$ 4) None

48. The weight of a dog is 8 kg plus one third its weight. The weight of the dog is   [   ]
    A) 11 kg   2) 12 kg   3) 14 kg   4) 15 kg

49. A radio is bought for Rs. 450 and sold for Rs. 495. The percentage of profit is   [   ]
    1) 20%   2) 15%   3) 10%   4) 25%

50. A man go to sleep at 8:25 P.M and wake up at 6:15A.M. For how long did he sleep   [   ]
    1) 8 hours 50 minutes   2) 10 hours 50 minutes
    3) 9 hours 50 minutes   4) 7 hours 45 minutes