

## TEST – 1 (Mathematics)

1. 6 times a number b is x less than a number y. Express this statement using literal numbers, numbers and sign of basic operations. 1
2. What is height of parallelogram whose area is  $12\text{cm}^2$  and one of the base is of 4cm length. 1
3. Express 2
  - a.  $8\frac{1}{3}\%$  as a fraction
  - b. 0.05 as a percent.
4. Find degree of following expressions : 2
  - a.  $x^5y^4 + x^2y + x^6y^2$
  - b.  $a^2b^2c^2 + ab^3c + a^3bc^3$
5. Divide 154 in the ratio 2
  - a. 4:5
  - b. 5:4
6. Calculate 2
  - a. 16.5% of 1000 litres
  - b. x if, x % of 250 is 125
7. Weight of 45 folding chairs is 18kg. How many chairs can be loaded on truck hving a capacity to carry 2000 kg load? 2
8. Calculate the loss % if Cost price is double the Selling price of an item. 2
9. Verify Euler's formula for cuboid. 2
10. Draw the front & top view of a cone. 2
11. If side of a square & radius of a circle both are same and equal to 7cm, then which of the two shapes would have larger area. 2
12. Find mean & mode of following data 2  
4, 1, 2, 3, 1, 2, 5, 3, 1, 4
13. What is the probability of getting a no. greater than 3 but smaller than or equal to 5, in single throw of a fair dice. 2
14. If the mean of the marks scored by Rahul in all 5 subjects was found to be 40. Calculate his total marks. 2
15. For how long is Rs. 5000/- needed to be deposited in bank so that it can make up an amount of Rs. 8000/-. Provided that bank provides a simple interest of 4.5% p.a. 2

16. If the value of diameter of a circle is doubled, what will be the change in
- Circumference 2
  - Area of the circle 2
17. If a strip 4cm wide is cut out from around a circle of radius 11 cm, then Find 4
- Area of remaining sheet
  - Area of cut out strip
18. If value of the perimeter of a square of side 7cm is equal to the area of a circle, then obtain the radius of the circle. 3
19. Construct a  $\Delta ABC$  with  $AB = 3\text{cm}$ ,  $CA = 5\text{cm}$ , and  $BC = 4\text{cm}$ . 3
20. What should be the selling price of an article so that a profit of 20% can be earned? Express SP in terms of its cost price. 3
21. Solve the following eqn<sup>s</sup> 6
- $3x + 10 = 2(x - 4)$
  - $\frac{100}{2x-10} = 2$
  - $\frac{12}{7}(x - 14) = 2 - 6x$
22. If a shopkeeper purchased 20 articles in Rs. 25,00,000/- , 15 articles were sold by him at a total profit of 15% and in the rest 5 articles he took a net loss of Rs.75,000/-.
- Was the dealer in overall profit or loss? In any case calculate the % value.

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