GSEB SSC Class 10 Maths 50 Important Questions

1. If n = 100, y fi di = 0 and A = 15, then the value of mean x =
    1. (A) 100 (C) 15
    2. (B) 115 (D) 11.5
2. Under section 80C, investment up to the fixed limit is exempted from income tax. (A) PPF (B) Bank F.D. (C) Shares (D) Mediclaim
3. i=Y+3, 5,-=X+ (A) 0 (B) 3 (C) (- 3) (D) 6
4. Find the solution set of the following pair of linear equations.
    1. i. 2x + y = 35 (1)
    2. ii. 3x + 4y = 65 (2)
5. Find the discriminant of the quadratic equation $x^2 + 5x + 1 = 0$.
6. Under the income tax section, the mediclaim premium is exempted. (A) 80 C (B) 88 C (C) 80 D (D) 88 D
7. On walking 'a' metres on the hilly way, making an angle of 30° with the ground, one can reach the height 'b' metres from the ground. Then
    1. (A) a = b (B) 2a = b (C) 2a = b (D) a = 2b
8. The formula to find the curved surface area of a Sphere is
    1. (A) nr2h (C) 37cr2
    2. (B) 4tr2 (D) arcr2
9. Find the sum of the first 11 terms of an Arithmetic Progression 2, 9, 16, 231 ------?
10. The senior citizen has invested Rs. 90,000 annually under section 80 C. He will get the exemption of Rs from his income.
    1. (A) 1,00,000 (C) 1,50,000
    2. (B) 1,85,000 (D) 90,000
11. For A(4, 3) and B(8, 9); the midpoint of AB = ?
12. Find the 60th term of an Arithmetic Progression 10, 20, 30, 40, _____?
13. The distance between the origin and point (x, y) is
    1. (A) x
    2. (B) y
    3. (C) x + y
    4. (D) Vx2 + y2
14. The centroid of a triangle with vertices A(3, 2), B(7, 5), and C(2, 2) is (A) (3, 4) (B) (4, 3)
    1. (C) (2' —2) (D) (61) 7 5
15. The sum of the ages of five persons five years ago was 50 years. The sum of the ages of the same persons will be years after five years.
    1. (A) 100 (B) 75 (C) 60 (D) 80
16. The cash price of a bicycle is Rs. 1,000. In the instalment scheme, a cash down payment is of Rs. 450, and two monthly instalments of Rs. 300 each. Find the rate of interest charged in the instalment scheme.
17. The angle of elevation of the top of the building from point A on the ground is 45°. If the distance of the building from point A is x and the height of the building is y, then (A) x = y (B) x < y (C) x > y (D) x = 2y
18. In a two-digit number, the number at the unit's place is '13', and the number at the ten's place is 'r.' The two-digit number is

1. (A) 10x + y (C) 10 r +p
2. (B) 10p + r (D) lOy + x

19. The cost price of a clock is Rs. 800. It can be purchased by paying Rs. 425 as a cash down payment and the remaining amount to be paid after two months, giving interest of Rs. 35. Find the value of the instalment.

20. Prove that tan 5° • tan 25° • tan 45° • tan 65° • tan 85° = 1

21. Solution set of x + y —1 = 0 and 2x + 2y = 2 is
    1. (A) { (1, 0)} (C) Null set
    2. (B) {(0, 1)} (D) Infinite set

22. Prove that the square of the length of the hypotenuse of a right-angled triangle is the sum of the courts of the lengths of the other two sides.

23. Prove that" Angles in a segment corresponding to minor arc are 5 congruent".

24. Prove that the "Angle made by a chord with tangent at one endpoint of the chord and the angle subtended by the chord in the alternate segment are congruent."

25. Using the centre of a Circle, draw a tangent to the circle through a point in the exterior of the circle. How many such tangents are drawn? Here, radius = 3 cm, and the distance of the point, in the exterior of their circle, from the centre is 7 cm.

26. Kailash's age at present is 2 years less than 6 times the age of his daughter Prema. The product of their ages 5 years later will be 330. What was the age of Kailash when his daughter Prerna was born?

27. Write the converse of Pythagoras Theorem and prove it.

28. Prove that the square of the length of the hypotenuse of a right-angled triangle is the sum of the squares of the lengths of the other two sides.

29. The petrol rate is increased by Rs. 5/- per litre. Now at Rs.1320/-, 2 litres less petrol is obtained as compared to the previous rate. Find the increased price of gasoline per litre.

30. Find the curved surface area of a Sphere whose diameter is 10 cm. (x = 3.14)

31. Two concentric circles with radii of 73 and 55 are given. The chord of a circle having a larger radius touches the small circle. Then, find the length of this chord.

32. Find the area of triangle ΔABC having vertices A4, 2), B3, 9) and C10, 10)

33. How many litres of water can be stored in a cylindrical tank with a radius of 1.4 m and a height of 4m?

34. On the Hemisphere, the frustum of a Cone-shaped shuttle-cock is used for playing Badminton. The outer radius of the frustum of the Cone is 5 cm, and the inner radius is 2 cm. The height of the entire shuttle-cock is 7 cm. Then, find the outer surface area of shuttle-cock.

35. Prove that "Angles in a segment corresponding to minor arcs are congruent."

36. Prove that "Angle made by a chord with tangent at one endpoint of the chord and the angle subtended by the chord in the alternate segment are congruent"'.

37. Using the centre of a Circle, draw a tangent to the circle through a point in the exterior of the circle. How many such tangents are drawn? Here, radius = 3 cm, and the distance of the point, in the exterior of their circle, from the centre is 7 cm.

38. While selling a calculator for Rs 56, the profit in percentage is equal to its cost price in rupees. Find the cost price of the calculator.

39. What is the volume of the sphere with a radius of 1.5 cm?

40. The radius of the sphere is _____ centimetre if its curved surface area is 616 sq. cm.

41. The sum of three consecutive terms of an A.P. is 48, the product of its first and the last term is 252, then find d?
42. The fifth term of an A.P. is 17, and its 9th term is 35 more than the 2nd term. Find the 20th term of an A.P.?
43. If m + z = 75 and m - z = 1.4, then find its mean median and mode values.
44. If the price of sugar decreases by Rs 5, one can buy 1 kg more sugar for Rs. 150. What is the cost of the sugar?
45. In rectangular paper, its length is 44 cm, and the breadth is 7 cm. By rolling the paper from its length, an open cylinder is formed. If a closed cylinder of the same size is taken, then find its total surface area.
46. Jai prepared a model from a plastic sheet like a cylinder with two cones attached at both ends. The total length of the model is 13 cm, and the height is 3 cm. The radius of the base of the Cone is 4 cm. Then, find the volume of air contained in the model.
47. State the converse of Pythagoras's theorem and prove it.
48. The circle is given the centre O and a radius of 3 cm. Take a point P such that O.P. = 7 cm. Draw tangents to the circle from point P. Write the construction steps.
49. Is LCM of 23, 35, 46?
50. The present age of the father is X years, and the total age of his two sons is Y years, then the sum of the ages 5 years hence will be?