1. Let  be a rational number. Then x has decimal expansion, which terminates :

(a) after two places of decimal (b) after three places of decimal

(c) after four places of decimal (d) after six places of decimal

2. The decimal expansion of  is

(a) terminating (b) non-terminating

(c) non termination and repeating (d) an irrational number

3. If HCF and LCM of two numbers are 4 and 9696 respectively, then the product of the two numbers is :

(a) 38924 (b) 78385 (c) 28785 (d) 38784

4. If a and b are positive integers, then HCF 

(a)  (b)  (c)  (d) 

5. If the HCF of two numbers is 1, then the two numbers are called :

(a) composite (b) relatively prime or co-prime

(c) perfect (d) irrational numbers

6. If  are the zeroes of the polynomials , then  is :

(a) 0 (b) 1 (c) -1 (d) 2

7. A quadratic polynomial whose sum and product of zeroes are – 3 and 2 is

(a)  (b)  (c)  (d) 

8. If  are the zeroes of the polynomial  and , then p =

(a)  (b)  (c) 3 (d) 2

9. If one zero of the quadratic polynomial  is 2, then the value of k is

(a) 12 (b) -10 (c) 15 (d) 5

10. If  and , then the value of  is

(a) 1 (b) -3 (c) 3 (d) 5

11. If  and , then  equals

(a)  (b)  (c)  (d) 

12. If the system of equations ,  has infinitely many solution, then k =

(a) 3 (b) 6 (c) 5 (d) 8

13. If the system of equations ,  has no solution, then k =

(a) -10 (b) -5 (c) – 6 (d) -15

14. The pair of equations  and  have

(a) a unique solution (b) exactly two solutions

(c) infinitely many solutions (d) no solution

15. If a pair of linear equations is consistent, then the lines will be

(a) parallel (b) always coincident

(c) intersecting or coincident (d) always intersecting

16. If in two triangles ABC and PQR, , then :

(a)  (b)  (c)  (d) 

17. In a , AD is the bisector of . If AB = 6 cm, AC = 5 cm and BD = 3cm, then DC =

(a) 11.3 cm (b) 2.5 cm (c) 3.5 cm (d) 4 : 5 cm

18. If  is an equilateral triangle such that , then 

(a)  (b)  (c)  (d) 

19. A ladder is placed against a wall such that its food is at distance of 2.5 m from the wall and its top reaches a window 6 cm above the ground. The length of the ladder is

(a) 9.5 m (b) 7.5 m (c) 8.5 m (d) 6.5 m

20. The lengths of the diagonals of a rhombus are 6 cm and 8 cm. Then the perimeter of the rhombus is

(a) 5 cm (b) 10 cm (c) 15 cm (d) 20 cm

21. A vertical stick 30 m long casts a shadow 15 m long on the ground. At the same time a tower casts a shadow 75 m long on the ground. The height of the tower is

(a) 150 m (b) 130 m (c) 125 m (d) 120 m

22. If ABC and DEF are similar triangles such that  and , then 

(a) 50° (b) 40° (c) 60° (d) 70°

23. The fourth vertex D of a parallelogram ABCD whose three vertices are  and  is

(a) (0, 1) (b) (0, -1) (c) (-1, 0) (d) (1, 0)

24. If the distance between the points (8, p) and (4, 3) is 5, then value of p is

(a) 6 (b) 3 (c) 5 (d) -6

25. The point P(1, 2) divides the join of  and  in the ratio is

(a) 3 : 2 (b) 2 : 3 (c) 2 : 1 (d) 1 : 2

26. If  and  are the vertices of , then length of median AD is

(a)  (b)  (c)  (d) 

27. The distance between the points  and  is

(a) a (b) 2a (c)  (d) 4a

28. The distance between the points (a, b) and  is :

(a) 2ab (b)  (c)  (d) 

29. If , then the value of the expression  is

(a) 1 (b)  (c) 2 (d) 3

30. If , then  is equal to

(a)  (b)  (c)  (d) 

31.  is equal to

(a)  (b)  (c)  (d) 

32. If triangle ABC is right angled at C, then the value of  is

(a) 0 (b) 1 (c)  (d) not defined

33.  is true when A =

(a) 30° (b) 45° (c) 90° (d) any angle

34. If , then the value of  is

(a) 0 (b) 1 (c) -1 (d) 

35. If  and , then 

(a)  (b)  (c)  (d) 

36. If  and , then 

(a)  (b)  (c)  (d) 

37. 

(a) 0 (b) -1 (c) 1 (d) 2

38. 

(a)  (b)  (c)  (d) 

39. If the circumference and the area of circle are numerically equal, then diameter of the circle is

(a) 2 (b) 4 (c)  (d) 

40. If the length of minute hand of a watch is , then the area swept by it between 9 a.m. to 9 : 10 a.m. is

(a)  (b)  (c)  (d) 

41. If an arc subtends an angle of 45° at the centre of the circle of radius a cm, then length of the arc is

(a)  (b)  (c)  (d) 

42. If the circumference of a circle is equal to the perimeter of a square, then the ratio of their areas is

(a) 22 : 7 (b) 14 : 11 (c) 7 : 22 (d) 7 : 11

43. The area of the circle that can be inscribed in a square of side 6 cm is

(a)  (b)  (c)  (d) 

44. The angle subtended by an arc of length  cm at the centre of the circle of radius 4 cm is

(a) 30° (b) 45° (c) 60° (d) 90°

45. A card is drawn from a pack of 52 playing cards. The probability that it is a queen is

(a)  (b)  (b)  (d) 

46. Two dice are thrown simultaneously. The probability of getting a prime number on both dice is

(a)  (b)  (c)  (d) 

47. The probability of drawing a green coloured ball from a bag containing 6 red and 5 black balls is

(a) 1 (b) 0 (c)  (d) 

48. The probability of guessing the correct answer to a question is . If the probability of not guessing the correct answer the same question is , then the value of p is

(a) 1 (b) 2 (c) 3 (d) 4

49. A dice is thrown once. The probability of getting a number less than 3 and greater than 2 is

(a) 1 (b)  (c)  (d) 0

50. A card is drawn at random from an ordinary pack of 52 playing cards. The probability that the card is a black king is

(a)  (b)  (c)  (d) 

51. Which of the following is not a polynomial ?

(a)  (b) 

(c)  (d) 

52. Which of the following is a polynomial.

(a)  (b)  (c)  (d) 

53. The degree of the polynomial  is :

(a) 2 (b) 3 (c) 1 (d) Not known

54. If  be the zeros of the quadratic polynomial , then value of 

(a) -2 (b) -1 (c) 1 (d) None of these

55. If be the zeros of the quadratic polynomial , then =

(a) 2 (b) 3 (c) 1 (d) None of these

56. A quadratic polynomial, whose zeros are -3 and 4, is

(a)  (b)  (c)  (d) 

57. A real number  is called a zero of the polynomial f(x) if

(a)  (b)  (c)  (d) None of these

58. If the sum of the zeros of the quadratic polynomial  is 3, then the value of k is

(a) 9 (b) 3 (c) -3 (d) 6

59. The quadratic polynomial, sum and product of whose zeros are respectively -1 and – 12 is

(a)  (b)  (c)  (d) 

60. Given that one of the zeros of the cubic polynomial  is zero, the product of the other two zeros is

(a)  (b)  (c) 0 (d) 

61.  and  are similar triangles such that  then  is

(a) 830 (b) 320 (c) 650 (d) 970

62. If , the value of 

(a) 470 (b) 300 (c) 400 (d) 500

63. If , the value of  is.

1. 600 (b) 500 (c) 400 (d) 300
2. If  and , the  is

(a) 100 cm2 (b) 125cm2 (c) 150 cm2 (d) 200 cm2

1. ABC and DEF are similar triangles such that , then  is.
2. 600 (b) 700 (c) 500 (d) 800
3. . M is the midpoint of BC and N is the midpoint of QR. If the area of  and the area of  If AM = 4 cm then PN is
4. 4.8 cm (b) 12 cm (c) 4 cm (d) 5.6 cm
5. If a vertical pole of length 6 cm casts a shadow 4m long on the ground and at the same time a tower casts a shadow 28 m long, then the height of the tower is.
6. 42 m (b) 21 m (c) 12 m (d) 45 m
7. . If  then length of AB is

a) 30 cm (b) 0.5 m (c) 50 cm (d) 3 m

69. If   then  is equal to

(a) 3 (b) 4 (c) 8 (d) 5

70. If , the value of is

(a) 0 (b) 1 (c) -1 (d) 2