Date …….

Roll No ……

GURU NANAK MATHS ACADEMY

M.G. ROAD NEAR HDFC BANK SAFIDON-126112, 9729630333

PT – II | Class – 10th | Time: 60 min.

Sub. – Maths | M.M. – 40

All questions are compulsory:-

Section – I (One marks questions)

1. The decimal expansion of $\frac{22}{7}$ is

(a) Terminating (b) Non-terminating and repeating (c) Non-terminating and Non-repeating (d) None of the above

2. Which of the following is not irrational?

(a) $(3 + \sqrt{7})$ (b) $(3 - \sqrt{7})$ (c) $(3 + \sqrt{7})(3 - \sqrt{7})$ (d) $3\sqrt{7}$

3. The addition of a rational number and an irrational number is equal to:

(a) rational number (b) Irrational number (c) Both (d) None of the above

4. The multiplication of two irrational numbers is:

(a) irrational number (b) rational number (c) Maybe rational or irrational (d) None

5. The largest number that divides 70 and 125, which leaves the remainders 5 and 8, is:

(a) 65 (b) 15 (c) 13 (d) 25

6. The decimal expansion of the rational number $\frac{23}{2^7 5^3}$ will terminate after

(a) two decimal place (b) three decimal places (c) five decimal places (d) seven decimal places

7. If the HCF of 65 and 117 is expressible in the form 65m – 117, then the value of m is

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

8. The prime factorization of 96 is

(a) $2^6 \times 3$ (b) 2^6 (c) $2^4 \times 3$ (d) $2^5 \times 3$

9. If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is

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

10. **If one of the zeroes of the quadratic polynomial $(k-1)x^2 + kx + 1$ is – 3, then the value of k is**

a) $\frac{4}{3}$ (b) $-\frac{4}{3}$ (c) $\frac{2}{3}$ (d) $-\frac{2}{3}$

11. **A quadratic polynomial, whose zeroes are -3 and 4, is**

(a) $x^2 - x + 12$ (b) $x^2 + x + 12$ (c) $x^2 - x - 12$ (d) $2x^2 + 2x - 24$

12. **If the zeroes of the quadratic $polynomial\ x^2 + (a+1)x + b\ are\ 2\ and\ -3$, then**

(a) a = -7, b = -1 (b) a = 5, b = -1 (c) a = 2, b = -6 (d) a – 0, b = -6

13. **The zeroes of the quadratic polynomial $x^2 + 99x + 127$ are**

(a) both positive (b) both negative (c) one positive and one negative (d) both equal

14. **The zeroes of the quadratic polynomial $x^2 + kx + k$, $k \neq 0$,**

(a) cannot both be positive (b) cannot both be negative (c) are always unequal (d) are always equal

15. **If the zeroes of the quadratic polynomial $ax^2 + bx + c$, $c \neq 0$ are equal, then**

(a) c and a have opposite signs (b) c and b have opposite signs

(c) c and a have the same sign (d) c and b have the same sign

16. **If one of the zeroes of a quadratic polynomial of the form $x^2 + ax + b$ is the negative of the other, then it**

(a) has no linear term and the constant term is negative. (b) has no linear term and the constant term is positive.

(c) can have a linear term but the constant term is negative. (d) can have a linear term but the constant term is positive.

17. **The number of polynomials having zeroes as 4 and 7 is**

(a) 2 (b) 3 (c) 4 (d) more than 4

18. **A quadratic polynomial, whose zeroes are -4 and -5, is**

(a) x^2-9x + 20 (b) x^2 + 9x + 20 (c) x^2-9x- 20 (d) x^2 + 9x- 20

19. **The zeroes of the quadratic polynomial $x^2 + 1750x + 175000$ are**

(a) both negative (b) one positive and one negative (c) both positive (d) both equal

20. **The zeroes of the quadratic polynomial $x^2 – 15x + 50$ are**

(a) both negative (b) one positive and one negative (c) both positive (d) both equal

21. **The zeroes of the quadratic polynomial $3x^2 – 48$ are**

(a) both negative (b) one positive and one negative (c) both positive (d) both equal

22. **The zeroes of the quadratic polynomial $x^2 – 18x + 81$ are**

(a) both negative (b) one positive and one negative (c) both positive and unequal (d) both equal and positive

23. **The zeroes of the quadratic polynomial $x^2 + px + p$, $p \neq 0$ are**

(a) both equal (b) both cannot be positive (c) both unequal (d) both cannot be negative

24. **If the zeroes of the quadratic polynomial $Ax^2 + Bx + C$, C # 0 are equal, then**

(a) A and B have the same sign (b) A and C have the same sign

(c) B and C have the same sign (d) A and C have opposite signs

25. **What is the number of zeroes that a linear poly-nomial has/have:**

(a) 0 (b) 1 (c) 2 (d) 3

26. **What is the number(s) of zeroes that a quadratic polynomial has/have:**

(a) 0 (b) 1 (c) 2 (d) 3

27. **If one zero of the quadratic polynomial $x^2 + 3x + b$ is 2, then the value of b is**

(a) 10 (b) -8 (c) 9 (d) -10

28. **If 1 is one of the zeroes of the polynomial $x^2 + x + k$, then the value of k is:**

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

29. A pair of linear equations $a_1x + b_1y + c_1 = 0$; $a_2x + b_2y + c_2 = 0$ is said to be inconsistent, if

(a) $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$ (b) $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$

(c) $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$ (d) $\frac{a_1}{a_2} \neq \frac{c_1}{c_2}$

30. Graphically, the pair of equations $7x – y = 5$; $21x – 3y = 10$ represents two lines which are

(a) intersecting at one point

(b) parallel

(c) intersecting at two points

(d) coincident

31. The pair of equations $3x – 5y = 7$ and $– 6x + 10y = 7$ have

(a) a unique solution

(b) infinitely many solutions

(c) no solution

(d) two solutions

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

(a) always coincident

(b) parallel

(c) always intersecting

(d) intersecting or coincident

33. The pair of equations $x = 0$ and $x = 5$ has

(a) no solution

(b) unique/one solution

(c) two solutions

(d) infinitely many solutions

34. The pair of equation $x = – 4$ and $y = – 5$ graphically represents lines which are

(a) intersecting at (- 5, – 4)

(b) intersecting at (- 4, – 5)

(c) intersecting at (5, 4)

(d) intersecting at (4, 5)

35. If the lines given by 2x + ky = 1 and 3x – 5y = 7 are parallel, then the value of k is

(a) $\frac{-10}{3}$ (b) $\frac{10}{3}$

(c) – 13 (d) – 7

36. One equation of a pair of dependent linear equations is 2x + 5y = 3. The second equation will be

(a) 2x + 5y = 6

(b) 3x + 5y = 3

(c) -10x – 25y + 15 = 0

(d) 10x + 25y = 15

37. . If x = a, y = b is the solution of the equations x + y = 5 and 2x – 3y = 4, then the values of a and b are respectively

(a) 6, -1

(b) 2, 3

(c) 1, 4

(d) 19/5, 6/5

38. The graph of x = -2 is a line parallel to the

(a) x-axis

(b) y-axis

(c) both x- and y-axis

(d) none of these

39. The graph of y = 4x is a line

(a) parallel to x-axis

(b) parallel to y-axis

(c) perpendicular to y-axis

(d) passing through the origin

40. The graph of y = 5 is a line parallel to the

(a) x-axis

(b) y-axis

(c) both axis

(d) none of these