Creative Math Marathi

Multiple Choice Question

STD: 10th Subject: Math 1

1. If 13x + 12y = 25 and 12x + 13y = 75 then find x + y
   A) 1 B) 2 C) 3 D) 4

2. To draw graph of 4x + 5y = 19, Find y when x = 1.
   (A) 4 (B) 3 (C) 2 (D) -3

3. For simultaneous equations in variables x and y, Dx = 49, Dy = - 63, D = 7 then what is x?
   (A) 7 (B) -7 (C) $\frac{1}{7}$ (D) $\frac{-1}{7}$

4. Find the value of $\begin{vmatrix} 5 & 3 \\ -7 & -4 \end{vmatrix}$
   (A) -1 (B) -41 (C) 41 (D) 1

5. To solve x + y = 3; 3x - 2y - 4 = 0 by determinant method find D.
   (A) 5 (B) 1 (C) -5 (D) -1

6. Which Pair is not solution of x + y = 8
   A) (5,3) B) (6,2) C) (7,1) D) (5,4)

7. For equation 5x + ay = 12 if x = 1 and y = 1 then find the value of a.
   A) 4 B) 7 C) 5 D) 6

8. Which one is the quadratic equation?
   (A) $\frac{5}{x}$ - 3 = x^2 (B) x (x + 5) = 2 (C) n - 1 = 2n (D) $\frac{1}{x^2}$ (x + 2) = x

9. Out of the following equations which one is not a quadratic equation?
   (A) x^2 + 4x = 11 + x^2 (B) x^2 = 4x (C) $5x^2$ = 90 (D) 2x - x^2 = x^2 + 5

10. The roots of x^2 + kx + k = 0 are real and equal, find k.
    (A) 0 (B) 4 (C) 0 or 4 (D) 2

11. For $\sqrt{2}x^2 - 5x + \sqrt{2} = 0$ find the value of the discriminant.
    (A) -5 (B) 17 (C) 2 (D) 2 $\sqrt{2}$ - 5

12. Which of the following quadratic equations has roots 3, 5?
(A) $x^2 - 15x + 8 = 0$ (B) $x^2 - 8x + 15 = 0$
(C) x2 + 3x + 5 = 0 (D) $x^2 + 8x - 15 = 0$

13. Out of the following equations, find the equation having the sum of its roots -5.
(A) $3x^2 - 15x + 3 = 0$ (B) $x^2 - 5x + 3 = 0$
(C) $x^2 + 3x - 5 = 0$ (D) $3x^2 + 15x + 3 = 0$

14. $\sqrt{5}m^2 - \sqrt{5}\ m + \sqrt{5} = 0$ which of the following statement is true for this given equation?
(A) Real and unequal roots (B) Real and equal roots
(C) Roots are not real (D) Three roots.

15. One of the roots of equation x2 + mx - 5 = 0 is 2; find m.
(A) -2 (B) $\frac{-1}{2}$ (C) $\frac{1}{2}$ (D) 2

16. Which are the roots of (x + 8) (x – 2) = 0
A) (-8, 2) B) (8, -2) C) (8, 2) D) (-8, -2)

17. Find the value of $b^2 - 4ac$ to equation $x^2 - 7x + 5 = 0$
(A) 49 (B) 29 (C) 92 (D) 69

18. The sequence -10, -6, -2, 2, . . .
(A) is an A.P., Reason d = -16 (B) is an A.P., Reason d = 4
(C) is an A.P., Reason d = -4 (D) is not an A.P.

19. First four terms of an A.P. are ...., whose first term is -2 and common difference is -2.
(A) -2, 0, 2, 4 (B) -2, 4, -8, 16 (C) -2, -4, -6, -8 (D) -2, -4, -8, -16

20. (3) What is the sum of the first 30 natural numbers?
(A) 464 (B) 465 (C) 462 (D) 461

21. For a given A.P. $t_7 = 4$, d = -4 then a = . . .
(A) 6 (B) 7 (C) 20 (D) 28

22. For an given A.P. a = 3.5, d = 0, n = 101, then t_n = . . .
(A) 0 (B) 3.5 (C) 103.5 (D) 104.5

23. In an A.P. first two terms are -3, 4 then 21st term is . . .
(A) -143 (B) 143 (C) 137 (D) 17

24. If for any A.P. d = 5 then $t_{18} - t_{13}$ = . . .
(A) 5 (B) 20 (C) 25 (D) 30

25. Sum of first five multiples of 3 is. . .
(A) 45 (B) 55 (C) 15 (D) 75

26. 15, 10, 5, . . . In this A.P. sum of first 10 terms is . . .
(A) -75 (B) -125 (C) 75 (D) 125

27. In an A.P. 1st term is 1 and the last term is 20. The sum of all terms is = 399 then n = . . .
(A) 42 (B) 38 (C) 21 (D) 19

28. Given Arithmetic Progression 12, 16, 20, 24, . . . Find the 24th term of this progression.
(A) 100 (B) 101 (C) 104 (D) 102

29. First term and common difference of an A.P. are 6 and 3 respectively; find S_{10}
(A) 39 (B) 195 (C) 196 (D) 390

30. Which number cannot represent a probability?
(A) $\frac{2}{3}$ (B) 1.5 (C) 15 % (D) 0.7

31. A die is rolled. What is the probability that the number appearing on upper face is less than 3?
(A) $\frac{1}{6}$ (B) $\frac{1}{3}$ (C) $\frac{1}{2}$ D) 0

32. What is the probability of the event that a number chosen from 1 to 100 is a prime number?
(A) $\frac{1}{5}$ (B) $\frac{6}{25}$ (C) $\frac{1}{4}$ D) 1

33. There are 40 cards in a bag. Each bears a number from 1 to 40. One card is drawn at random. What is the probability that the card bears a number which is a multiple of 5?
(A) $\frac{1}{5}$ (B) $\frac{3}{5}$ (C) $\frac{4}{5}$ D) $\frac{1}{3}$

34. If n(A) = 2, P(A) = $\frac{1}{5}$, then n(S) =?
(A) 10 (B) $\frac{5}{2}$ (C) $\frac{2}{5}$ D) $\frac{1}{3}$

35. If two coins are tossed, find the probability of - Getting at least one head.

(A) $\frac{1}{4}$ (B) $\frac{2}{4}$ (C) $\frac{3}{4}$ D) $\frac{4}{4}$

36. Three coins are tossed simultaneously, find the n(S)

(A) 2 (B) 4 (C) 8 (D) 16

37. If two dice are rolled simultaneously, find the n(S)

(A) 6 (B) 12 (C) 18 (D) 36

38. Find the sum of first n natural numbers.

(A) n^2 (B) n (n + 1) (C) $n^2 + 1$ (D) $\frac{n(n+1)}{2}$

39. Product of Pragati's age 2 years ago and 3 years hence is 84. Find her present age.

(A) 6 (B) 7 (C) 8 (D) 9

40. Two numbers differ by 3. The sum of twice the smaller number and thrice the greater number is 19. Find the numbers.

A) (5,3) B) (5,2) C) (6,4) D) (5,4)