IMPORTANT QUESTIONS (CHAPTER 1 – 5)

1. State Euclid division lemma.
2. State Fundamental Theorem of Arithmetic.
3. Find the HCF of 105 and 245 by Euclid division algorithm.
4. Express 296 as a product of its primes
5. Find the HCF and LCM of 75 and 160 by Fundamental theorem of Arithmetic and verify LCM x HCF = product of two numbers
6. If HCF of 30 and 45 is 15. Find the LCM.
7. Prove $5 + 2\sqrt{3}$ is irrational
8. Check whether 17/210 is terminating or non-terminating.
9. Find the zeros and verify the relation between zeros and coefficients of (i) $x^2 + 11x + 30$ (ii) $x^2 - 9$
10. Find the number of zeros of in fig (i)

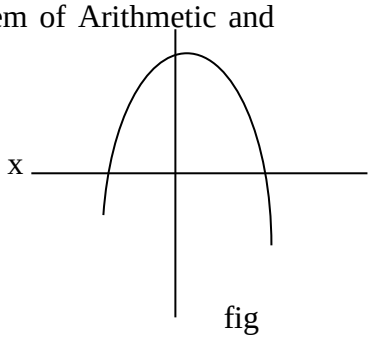

fig (i)

11. Find a quadratic polynomial whose sum and product of zeros are 1/3 and -1/3
12. Divide $3x^2 – x^3 – 3x + 5$ by $x – 1 – x^2$ and verify the division algorithm
13. On dividing $2x^3 + 4x^2 + 5x + 7$ by g(x) the quotient and remainder are 2x and 7 – 5x respectively. Find g(x)
14. State the condition so that the pair of linear equations $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ have no solution, unique solution or infinite solution.
15. For what value of k the eq. $kx + 3y – (k – 3) = 0$ and $12x + ky – k$ have infinite many solution
16. Check whether $7x + 3y = 27$ and $2x + 5y = 16$ have unique solution, no solution or infinite many solution.
17. Check whether $2x + 3y = 7$ and $4x + 6y = 16$ are consistent or inconsistent.
18. Find k if $kx + 3y + 1 =$ and $2x + y + 3 = 0$ has unique solution.
19. Check whether $5x – 3y = 11$ and $-10x + 6y = -22$ represent an intersecting lines, parallel lines or coincident lines.
20. Solve: $2/x + 2/3y = 1/6$ and $3/x + 2/y = 0$
21. Solve graphically $x – y + 1 = 0$ and $3x + 2y – 12 = 0$
22. Solve $6x + 3y = 6xy$ and $2x + 4y = 5xy$
23. Check whether x = -1 is a solution of equation $4x^2 – 3x – 1 = 0$
24. Find k if one root of equation $x^2 + kx – 4 = 0$
25. Solve by factorization: $9x^2 – 3x – 20 = 0$
26. Solve by completing square method: $6x^2 – 13x – 5 = 0$
27. Find the nature of roots of equation $9x^2 + 12x + 4 = 0$
28. Find k if $2kx^2 + 6x + 5 = 0$ has equal roots.
29. Solve $x – 1/x = 3$
30. Find the 20^{th} term of the AP 7, 3, -1, -5 ……
31. Write the AP whose 3^{rd} term is 5 and 7^{th} term is 9.
32. Determine 15^{th} term from the end of the AP 8, 13, 18, …….. 153
33. n^{th} term of an AP is given by 5n – 3. Find the AP
34. Find the sum of 20 terms of the AP 5, 8, 11, 14
35. Which term of the AP 3, 8, 13, …… is 78.
36. Check whether 301 is a term of A.P. 5, 11, 17, 23