Practice Test Paper - 1

Name : **Max Marks - 25**

Chapter - Real Number, Polynomials **Class - 10**

1- Marks

1. Find the $[HCF \times LCM]$ for the numbers 100 and 190.
2. If α, β are the zeroes of a polynomial, such that $\alpha + \beta = 6$ and $\alpha\beta = 4$, then write the polynomial.
3. Show that $x = -3$ is a solution of $x^2 + 5x - 3 = 0$.
4. The sum and product of the zeroes of a quadratic polynomial are −1/2 and −3 respectively. What is the quadratic polynomial?
5. What is the HCF of the smallest prime number and smallest composite number?

2- Marks

6. Find a quadratic polynomial whose zeroes are −4 and 3 and verify the relationship between the zeroes and the coefficients.
7. State the Fundamental Theorem of Arithmetic. Find the LCM of numbers 2520 and 10530 by the prime factorization method.
8. Which of the following rational numbers has a terminating decimal expansion?

   a. $\frac{125}{441}$ b. $\frac{77}{210}$ d. $\frac{129}{2^2.5^2.7^2}$

3- Marks (any 2)

9. If α and β are zeroes of the quadratic polynomial $x^2 - 6x + a$; find the value of 'a' if $3\alpha + 2\beta = 20$.
10. Show that any positive odd integer is of the form 4q + 1 or 4q + 3, where q is some integer.
11. Prove that √5 is an irrational number.

4- Marks (any 2)

12. Find the zeroes of the quadratic polynomial $7y^2 - \frac{11}{3}y - \frac{2}{3}$ and verify the relationship between the zeroes and the coefficients.
13. If β and $\frac{1}{\beta}$ are zeroes of the polynomial $(\alpha^2 + \alpha)x^2 + 61x + 6\alpha$. Find the values of β and α. **(compulsory for CBSE)**
14. Find all the zeroes of the polynomial $3x^4 + 6x^3 - 2x^2 - 10x - 5$ if two of its zeroes are $\sqrt{\frac{5}{3}}$ and $-\sqrt{\frac{5}{3}}$. **(compulsory for GSEB)**