Comprehensive Test Series-01
IX

TIME: 45m. **MM: 30**

General Instructions:

- All Questions are compulsory.
- Each question carries 3 marks
- Use of calculator is not permitted.

Q1. Write the coefficients of x^2 in each of the following.

(i) $2 + x^2 + x$ (ii) $2 – x^2 + x^3$

Q.2 Verify whether the following are zeroes of the polynomial, indicated against them.

(i) $p(x) = 3x + 1, x = -\frac{1}{3}$

(ii) $p(x) = 3x^2 - 1, x = -\frac{1}{\sqrt{3}}, \frac{2}{\sqrt{3}}$

Q. 3 Find the reminder when $x^4 + x^3 – 2x^2 + x + 1$ is divided by $x – 1$.

Q.4 Find the remainder when $x^3 – ax^2 + 6x – a$ is divided by $x – a$

Q. 5 Use the Factor Theorem to determine whether g (x) is a factor of p(x).

(i) $p(x) = x^3 – 4x^2 + x + 6, g(x) = x – 3$.

Q. 6 Use suitable identities to find the following products:

(i) $(x -4) (x + 10)$ (ii) $(3x + 4) (3x – 5)$

Q.7 Evaluate the following products without multiplying directly.

(i) 95 x 96 (ii) 103 x 107

Q.8 Factories the following using appropriate identities:

(i) $9x + 6xy + y^2$ (ii) $4y^2 – 4y +1$

Q.9 Factor

(i) $6x^2 + 5x -6$ (ii) $x^3 + 13x^2 + 32x + 20$ (iii) $x^3 – 3x^2 – 9x -5$