Board –CBSE	Class – 9th	Topic – Factorisation of Polynomials

Section A – Multiple Choice Questions (1 mark each)

1. Which of the following is the factorised form of $x^2 - 4x + 4$?
   A) $(x-2)^2$ B) $(x+2)^2$ C) $(x-4)^2$ D) $x(x-4)$

2. If $x = 1$ is a zero of the polynomial $x^2 - 3x + 2$, one factor is:
   A) $x+1$ B) $x-1$ C) $x-2$ D) $x+2$

3. What is the degree of the polynomial $x(x+2)(x-5)$?
   A) 1 B) 2 C) 3 D) 0

4. The identity used to factorise $a^2 + 2ab + b^2$ is:
   A) $(a-b)^2$ B) $a^2 - b^2$ C) $(a+b)^2$ D) $(a+b)(a-b)$

5. The factorised form of $x^2 - 16$ is:
   A) $(x-4)^2$ B) $x(x-16)$ C) $(x+4)(x-4)$ D) $(x+16)(x-16)$

Section B – Short Answer Type (2 marks each)

6. Factorise: $x^2 + 7x + 10$

7. Factorise: $3x^2 - 27$

8. Factorise: $4x^2 + 12x + 9$ using identity

Section C – Short Answer Type (3 marks each)

9. Factorise: $x^3 - 6x^2 + 11x - 6$

10. Factorise completely: $2x^2y - 4xy^2 + 6xy$

Section D – Long Answer Type (4 marks each)

11. Factorise: $x^3 + x^2 - x - 1$ (Use regrouping method)

12. Factorise: $6x^3 + 5x^2 - 6x - 5$ (Hint: split the middle term and regroup)