Name: _____	**Subject:** Math	**Class:** 9th	**Time:** 60 minutes	Total Marks:	**30**
Unit Number: 5	**MJDexpert.com**			Obtained marks	

Q#1	**Circle the correct option**	**1×6=6**

1. $x^3 - 4x^2 + 3x + 2$ is a factor of.....

a) $(x - 1)$	b) $(x - 2)$	c) $(x - 3)$	d) $(x - 4)$

2. The polynomial $(x - a)$ is a factor of polynomial p(x) if and only if...

a) $P(a) = R$	b) $P(a) = 0$	c) $P(a) = 1$	d) None of these

3. The process of expressing an algebraic expression in terms of its factors is called.....

a) Rationalization	b) Factorization	c) Factor of polynomial	d) Factor of reminder

4. Factor theorem has been used to factorize..... polynomials.

a) Square	b) Cubic	c) Unity	d) Both a and b

5. If a polynomial $p(x)$ is divided by a linear divisor $(x - a)$, then the remainder is.....

a) 0	b) 1	c) 2	d) 3

6. Factors of $3x^2 - x - 2$ are.....

a) $(x + 1)(3x - 2)$	b) $(x + 1)(3x + 2)$	c) $(x - 1)(3x - 2)$	d) $(x - 1)(3x + 2)$

Q#2	**Attempt all the short questions**	**2×8=16**

i. $(2x - 1)^3 + 6(3 + 4x)^2 - 10$ is divided by $(2x + 1)$.

ii. For what value of m is the polynomial $P(x) = x^3 - 7x^2 + 6x - 3m$ exactly divisible by $x + 2$?

iii. Factorize , $25x^2 - 10x + 1 - 36z^2$.

iv. Factorize, $12x^2 - 36x + 27$.

v. Factorize $8x^3 + 125y^3$.

vi. Factorize $x^2 - y^2 - 4xz + 4z^2$.

vii. What is mean by Zero of polynomial?

viii. Factorize $x^4 + x^2 + 25$.

Q#3	**Write detailed answer of the following questions**	**4×2=08**

a) Factorize Cubic Polynomial $2x^3 + x^2 - 2x - 1$ by factor theorem.

b) Determine the value of k if $p(x) = kx^3 + 4x^2 + 3x - 4$ and $q(x) = x^3 - 4x + k$ leaves a same reminder when divided by $(x - 3)$.