

# CLASS TEST: POLYNOMIALS-X (MATHEMATICS)

Time Allowed 30 Minutes

Maximum Marks: 15

## **General Instructions:**

1. In this question paper have 9 questions.
2. Q1 to Q5 are MCQs each carry 1 mark, Q6 to Q7 are short type Qs each carry 2 marks and Q8 to Q9 are long answer type Qs each carry 3 marks.
3. Write your answer on given space.

Name of Student: \_\_\_\_\_, Class: \_\_\_\_\_, Achieve Marks: \_\_\_\_\_

MULTIPLE CHOICE QUESTIONS (Q1-Q5)		1x5=5
Q.N.	Question	Answer
Q1.	If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is: (a) 10 (b) -10 (c) 5 (d) -5	
	ANS :	
Q2.	The zeroes of the quadratic polynomial $x^2 + 10x + 16$ are: (a) both +ve (b) both -ve (c) one +ve and one -ve (d) both equal	
	ANS :	
Q3.	A quadratic polynomial, whose zeroes are -4 and -5, is (a) $x^2 - 9x + 20$ (b) $x^2 + 9x + 20$ (c) $x^2 - 9x - 20$ (d) $x^2 + 9x - 20$	
	ANS :	
Q4.	The graph of the polynomial $ax^2 + bx + c$ is an upward parabola if: (a) $a > 0$ (b) $a < 0$ (c) $a = 0$ (d) None <b>OR</b> Graph of a quadratic polynomial is a (a) straight line (b) circle (c) parabola (d) ellipse	
	ANS :	
Q5.	The sum and the product of the zeroes of polynomial $6x^2 - 5$ respectively are (a) 0, $-6/5$ (b) 0, $6/5$ (c) 0, $5/6$ (d) 0, $-5/6$	
	ANS :	
SHORT ANSWER TYPE QUESTIONS(Q6-Q7)		2x2=4
Q6.	Find the quadratic polynomial, the sum of whose zeroes is 8 and their product is 12. Hence, find the zeroes of the polynomial	
	ANS :	

Q7.	<p>If <math>\alpha</math> and <math>\beta</math> are zeroes of <math>x^2 - 4x + 1</math>, then find the value of <math>1/\alpha + 1/\beta - \alpha\beta</math> is</p> <p style="text-align: center;"><b>OR</b></p> <p>If <math>\alpha, \beta</math> are the zeroes of the polynomial <math>p(x) = x^2 - 16</math>, then <math>\alpha\beta(\alpha + \beta)</math></p>
	<b>ANS :</b>
<p style="text-align: center;"><b>LONG ANSWER TYPE QUESTIONS(Q6-Q7)</b> <span style="float: right;"><b>3x2 = 6</b></span></p>	
Q8.	<p>If <math>\alpha, \beta</math> are zeroes of <math>x^2 - 6x + k</math>, what is the value of <math>k</math> if <math>3\alpha + 2\beta = 20</math>?</p> <p style="text-align: center;"><b>OR</b></p> <p>Find the value of '<math>k</math>' such that the quadratic polynomial <math>3x^2 + (2k+1)x - (k+5)</math> has the sum of zeroes as half of their product.</p>
	<b>ANS :</b>
Q9.	Find the zeroes of the quadratic polynomial $6x^2 - 3 - 7x$ and verify the relationship between the zeroes and the coefficient of the polynomial.
	<b>ANS :</b>