

Syllabus	Unit # 05							
Math :	Objective	Subjective					Grand Total	Obtained
Question #	01 To 32	33	34	35	36	37		
Number :	10	10	10	10	10	10	60	
Obtained								
Passing Marks:	33	Status :			Sig. Guardian			

### Multiple Choice Questions

☆ Mark correct option on computerized answer sheet.

(0.5 × 20 = 10)

- Biquadratic algebraic expression is a polynomial of degree:
  - One
  - Two
  - Three
  - Four
- $4x + 2y + 3z$  is an algebraic \_\_\_\_\_.
  - Expression
  - Equation
  - Inequality
  - Symbol
- $2x^{-2}$  is:
  - A polynomial
  - Not a polynomial
  - A constant term
  - An inequality
- In a polynomial the number multiplied with the variable is called:
  - Number
  - Coefficient
  - Index
  - Constant
- In  $2x - 3y + 4z$ , there are \_\_\_\_ variables.
  - 2
  - 3
  - 4
  - 5
- \_\_\_\_\_ are used to represent variable.
  - Constant
  - Number
  - Alphabets
  - Letters
- $3y^2$  is \_\_\_\_ polynomial.
  - Linear
  - Quadratic
  - Cubic
  - Biquadratic
- If  $x + y = 6$ ,  $x - y = 2$ , then  $y =$  \_\_\_\_
  - 4
  - 6
  - 2
  - 8
- $8x - (5x + 9y - 23) =$  \_\_\_\_
  - $3x - 9y + 23$
  - $3x + 9y + 23$
  - $3x - 9y - 23$
  - $3x + 9y - 23$
- The answer of  $2x + 5(2x + 3x + 3)$  is
  - $x + 8$
  - $27x + 15$
  - $x + 3$
  - $7x + 8$
- By adding  $7 - x - x^2$  and  $x^3 + x^2 + x - 4$ , we get:
  - $x^3 + 3$
  - $x^3 + x^2 + x - 4$
  - $x^2 + 2$
  - $x^3 + 2x^2 + 2x - 11$
- Solution of  $(x^4 + 3x^2 + 7) \times 4x$  is:
  - $4x^5 + 12x^3 + 28x$
  - $x^4 + 3x^2 + 7$
  - $4x^4 + 9x^2 + 7x + 1$
  - $5x^5 + 7x^3 + 11x$
- In  $3x + y$  there are \_\_\_\_ variables.
  - 2
  - 1
  - 4
  - 3
- The product of  $4x^2$  and  $5x^3$  is
  - $20x^6$
  - $20x^5$
  - $9x^5$
  - $9x^6$
- Which of the following is not a polynomial?
  - 12
  - z
  - $2x + 5y$
  - $x^3 + y^{-2} + 3$
- If the sum of two polynomials is zero then P and Q are called \_\_\_\_ for each other.
  - Multiplicative inverse
  - Additive inverse
  - Subtractive inverse
  - Division inverse

17. Who was considered the "father of modern Algebra" ?  
 (a) Al Razi (b) Al Khawaraizmi (c) Newton (d) J.J. Thomson
18.  $(z^3 + 2z + 3) + (-z + 1) = ?$   
 (a)  $z^3 + z + 4$  (b)  $z + 4$  (c)  $z^3 - z + 2$  (d)  $z^3 + 3z + 4$
19. In an expression  $5x+9$ , 5 and 9 are:  
 (a) Constant (b) Variable (c) Literals (d) Algebraic expression
20. Polynomial with degree 4 is called:  
 (a) Linear polynomial (b) Quadratic polynomial (c) Cubic polynomial (d) Biquadratic polynomial

### Open Ended Questions

33. (a) Write the literal used in equation:  $cx^2 + dx = 0$  (02)  
 (b) Write the degree of the polynomial:  $x^3 - xy + 1$  (02)  
 (c) Subtract P from Q when  $P = 3x^4 + 5x^3 + 2x^2 - x$ ,  $Q = 4x^4 + 2x^2 + x^3 - x + 1$  (06)
34. (a) Divide  $x^3 - 2x + 4$  by  $x + 2$  (04)  
 (b) Multiply  $2x - 3$  with  $5x + 6$  (03)  
 (c) Define algebraic expression. (03)
35. (a) Write the difference between cubic polynomial and biquadratic polynomial. (04)  
 (b) Find the product of the polynomial  $(x + 3)(x^2 - 3x + 9)$  (03)  
 (c) Solve:  $(-2x^2 + 5y^2 - 3z^2) - (5x^2 - 3y^2 - 6z^2)$  (03)
36. (a) Identify the given polynomials are linear, quadratic, cubic and biquadratic:  
 $3y + 2$ ,  $z^2 - 1$ ,  $x^2 - x$ ,  $y + z$ ,  $z^3 + z^2 - 2$ ,  $y^4 + y^3 - y^2$ ,  $x^2z^2 + xz$ ,  $y^2 + xy + 10$  (04)  
 (b) Solve:  $(3x^2)(12y)$  (03)  
 (c) Solve:  $(x^3 - 19x - 3) \div (x + 3)$  (03)
37. (a) What should be added to  $4x^3 - 10x^2 + 12x + 6$  so that it becomes exactly divisible by  $2x + 1$ ? (04)  
 (b) Find the sum of the polynomial:  $9z + 3y^2 - 5x^3$ ,  $-z - 2y^2 - 4x^3$ ,  $z - x^3$  and  $-2z + 3y^2$  (03)  
 (c) Write the degree of the polynomial: (i)  $x^3 - xy + 1$  (ii)  $x^2y^2 + x^3 + y^2 - 1$  (03)