

### Objective Type Questions

- Q.1** Each questions has four possible answers. Choose the correct answer and encircle it.
- \_\_1. If the degree of numerator  $N(x)$  is equal or greater than the degree of denominator  $D(x)$ , then the fraction is:  
 (a) proper (b) improper  
 (c) Neither proper non-improper (d) Both proper and improper
- \_\_2. If the degree of numerator is less than the degree of denominator, then the fraction is:  
 (a) Proper (b) Improper  
 (c) Neither proper non-improper (d) Both proper and improper
- \_\_3. The fraction  $\frac{2x + 5}{x^2 + 5x + 6}$  is known as:  
 (a) Proper (b) Improper  
 (c) Both proper and improper (d) None of these
- \_\_4. The number of partial fractions of  $\frac{6x + 27}{4x^3 - 9x}$  are:  
 (a) 2 (b) 3  
 (c) 4 (d) None of these
- \_\_5. The number of partial fractions of  $\frac{x^3 - 3x^2 + 1}{(x - 1)(x + 1)(x^2 - 1)}$  are:  
 (a) 2 (b) 3  
 (c) 4 (d) 5
- \_\_6. The equivalent partial fraction of  $\frac{x + 11}{(x + 1)(x - 3)^2}$  is:  
 (a)  $\frac{A}{x + 1} + \frac{B}{(x - 3)^2}$  (b)  $\frac{A}{x + 1} + \frac{B}{x - 3}$   
 (c)  $\frac{A}{x + 1} + \frac{B}{x - 3} + \frac{C}{(x - 3)^2}$  (d)  $\frac{A}{x + 1} + \frac{Bx + C}{(x - 3)^2}$
- \_\_7. The equivalent partial fraction of  $\frac{x^4}{(x^2 + 1)(x^2 + 3)}$  is:  
 (a)  $\frac{Ax + B}{x^2 + 1} + \frac{Cx + D}{x^2 + 3}$  (b)  $\frac{Ax + B}{x^2 + 1} + \frac{Cx}{x^2 + 3}$   
 (c)  $1 + \frac{Ax + B}{x^2 + 1} + \frac{Cx + D}{x^2 + 3}$  (d)  $\frac{Ax}{x^2 + 1} + \frac{Bx}{x^2 + 3}$

\_\_ 8. Partial fraction of  $\frac{2}{x(x+1)}$  is:

(a)  $\frac{2}{x} - \frac{1}{x+1}$

(b)  $\frac{1}{x} - \frac{2}{x+1}$

(c)  $\frac{2}{x} - \frac{2}{x+1}$

(d)  $\frac{2}{x} + \frac{2}{x+1}$

\_\_ 9. Partial fraction of  $\frac{2x+3}{(x-2)(x+5)}$  is called:

(a)  $\frac{2}{x-2} + \frac{1}{x+5}$

(b)  $\frac{3}{x-2} + \frac{1}{x+5}$

(c)  $\frac{2}{x-2} + \frac{3}{x+5}$

(d)  $\frac{1}{x-2} + \frac{1}{x+5}$

\_\_ 10. The fraction  $\frac{(x-1)(x-2)(x-3)}{(x-4)(x-5)(x-6)}$  is called:

(a) Proper

(ii) Improper

(c) Both proper and Improper

(iv) None of these

**Answers:**

- |    |   |    |   |    |   |    |   |     |   |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | a | 3. | a | 4. | b | 5.  | c |
| 6. | c | 7. | c | 8. | c | 9. | d | 10. | B |