

## SECTION – B

**NOTE:** solve any EIGHT of the following questions, each question carries 04 marks.

- Q.1 simplify  $\frac{2+6i}{3-i} \cdot \frac{4+i}{3+i}$
- Q.2 Solve:
- Q.3 find the continued product by using relevant formula:  $(X-Y)(X+Y)(X^2+Y^2)-(X^4+Y^4)$
- Q.4 simplify:  $\frac{x^2-x-12}{x^2+x-12} \cdot \frac{x^2-9}{2x^2}$
- Q.5 find the continued product by using relevant formula:
- Q.6 Find remainder by using remainder theorem  $X^3-3x^2+4x-14$  is divided by  $(x+2)$
- Q.7 find square root of  $25x^4+40x^3+26x^2+8x+1$
- Q.8 Prove that. Any point on the bisector of an angle is equidistant from its arms.
- Q.9 Find the solution set of  $\frac{2x+1}{3} = 8$
- Q.10 solve by using quadratic formula  $10x^2+19x-15=0$
- Q.11 If  $x=3-2\sqrt{2}$  then find  $x^2+\frac{1}{x^2}$
- Q.12 solves:  $\frac{7x-4}{15} = \frac{7x+4}{10}$

## SECTION – C

**NOTE:** Solve any FOUR of the following questions, Each question carries 07 marks.

- Q.13 Factorize any three of the following questions. Each question carries 07 marks.
- (i)  $4a^2 + 12ab + 9ab^2$                       (ii)  $y^2 + 7y - 98$
- (iii)  $x^4 + 4y^4$                                   (iv)  $(x^2 - 4x - 5)(x^2 - rx - 12) - 144$
- Q.14 Solve the equation  $x + \sqrt{x+5} = 7$
- Q.15 Solve path the hell of logarithm  $\frac{(4.308)^3 \times \sqrt{80.06}}{(0.3387)^3}$
- Q.16 Find the value of  $a^2 + b^2$  and  $ab$  when  $a+b=5$  and  $a-b=3$ .
- Q.17 Show that the points A (3, 2), B(9, 10) and C(1, 16) form an Isosceles triangle.
- Q.18 Construct a triangle ABC such that  $m\angle A = 50^\circ$ ,  $m\angle B = 55^\circ$  and  $m\angle C = 95^\circ$