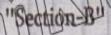
## Mathematics (9

(Fresh New Course)





Attempt and Nine (9) of the following parts. Each part carries equal marks. Q. 2.

- (i)
- Find the HCF of x 3,  $x^2 9$ ,  $(x 3)^2$  by factorization method. (ii)
- Simplify:  $\left(\frac{25}{91}\right)^{\frac{7}{2}}$ (iii)
- Find anti-logarithm of 0.8401 (iv)
- Find the value of  $a^2 + b^2$ , when a + b = 10, a b = 6(v)
- If  $x = 5 2\sqrt{6}$ , find the values of  $x + \frac{1}{\sqrt{2}}$  and  $x^2 + \frac{1}{\sqrt{2}}$ (vi)
- Factorize:  $6x^3 15x^2 9x$ (vii)
- Factorize: a3 64b3 (viii)
- Find the square root of  $4x^4 4x^3 + 18x^2 6x + 9$  by division method. (ix)
- Solve the equation  $\sqrt{2x-7} + 8 = 11$ (x)
- Find the solution set of  $\left| \frac{3}{4}x 8 \right| = 1$ (xi)
- The length of a rectangular playground is twice its width. The perimeter is 60. Find its dimensions. (xii)

## "Section-C"

Attempt any Three (3) questions. Each question carries equal marks. Note:-

- Prove that: A(2,3), B(8,11) and C(0,17) are the vertices of an isosceles triangle Q. 3.
- Prove that: If two opposite sides of a quadrilateral are gongruent, then the quadrilateral is a Q. 4. parallelogram.
- Prove that: The right bisectors of the sides of a triangle are concurrent. Q. 5.
- Construct & ABC, draw their angle bisectors and verify their concurrency. Q. 6.

m  $\overline{AB} = 4.5$  cm, m  $\overline{BC} = 3.1$  and m  $\overline{CA} = 5.2$  cm

