



**IPE MODEL :: MATHS - IIB (40 Marks)**

**Syllabus: Tangents&Normals Ex:1.2 LAQs 4 to 13,Eg:1.2.5,1.2.7,Chord of contact Ex:1.3 LAQS 1 to 6,SAQs 1,2,VSAQs 1 to 5**

**SECTION-A**

**I. VSAQ: Answer ALL the questions. 5 x 2=10M**

1. Find the equation of the chord of contact of the point (1, 1) to the circle  $x^2 + y^2 = 9$ .
2. Find the polar of the point (2, 3) with respect to  $x^2 + y^2 + 6x + 8y - 96 = 0$ .
3. Find the pole of the line  $ax + by + c = 0$  with respect to  $x^2 + y^2 = r^2$ .
4. Show that the points (4, -2), (3, -6) are conjugate w.r.to the circle  $x^2 + y^2 = 24$ .
5. Find the value of K, if the points (4, 2), (K, -3) are conjugate points w.r.to the circle  $x^2 + y^2 - 5x + 8y + 6 = 0$ .

**SECTION-B**

**II. SAQ: Answer any FOUR of the following questions. 4 x 4 = 16M**

6. Find the length of the chord  $x - y - 3 = 0$  of the circle  $x^2 + y^2 - x + 3y - 22 = 0$ .
7. Find the pole of the line  $x + y + 2 = 0$  with respect to the circle  $x^2 + y^2 - 4x + 6y - 12 = 0$ .
8. Find the inverse point of (-2, 3) with respect to the circle  $x^2 + y^2 - 4x - 6y + 9 = 0$ .
9. If the line  $y = mx + c$  and  $x^2 + y^2 = a^2$  intersect at A and B and  $AB = 2\lambda$  then show that  $c^2 = (1 + m^2)(a^2 - \lambda^2)$ .
10. Find the value of 'k'. If the lines  $x + y - 5 = 0$ ,  $2x + ky - 8 = 0$  are conjugate w.r.to the circle.

**SECTION-C**

**III. LAQ: Answer any TWO of the following questions. 2 x 7 = 14M**

11. Find the equation of circle. Which has a radius  $\sqrt{13}$  and tangent as the line  $2x - 3y + 1 = 0$  at (1, 1).
12. If  $\theta_1, \theta_2$  are the inclinations of the tangents through 'p' to the circle  $x^2 + y^2 = a^2$ . Find the locus of 'p' when  $\cot \theta_1 + \cot \theta_2 = k$ .
13. Find the coordinates of the point of intersection of tangents at the points where  $x + 4y = 14$  meets the circle  $x^2 + y^2 - 2x + 3y - 5 = 0$ .



# SRIGAYATRI EDUCATIONAL INSTITUTIONS

INDIA

SR MEC

Time: 1.30 Hours

IPE MODEL

Date: 09-08-2020

Max. Marks: 50

## IPE MODEL :: COMMERCE (50 Marks)

**Syllabus: Introduction on modes of transport ,Road transport Types of warehouses , Not-for profit organizations**

### SECTION-A

**I. VSAQS Answer Any Five of the following** **5x2=10m**

1. Bonded ware houses
2. Transport
3. Transportation
4. General Donations
5. Subscriptions
6. Specific Donations
7. Legacy
8. Life Membership Fees

### SECTION-B

**II. SAQ'S Answer Any Four of the following** **4x5=20m**

9. Explain the merits of Rail Transport.
10. Explain the demerits of Rail Transport.
11. "For transporting perishable products to distance places Air transport is most suitable" explain?
12. Explain the different types of warehouses
13. Difference between Capital Receipt and Revenue receipt.
14. Difference between Capital Expenditure and Revenue Expenditure

### SECTION-C

**III. LAQ'S ANSWER ANY TWO of the following questions** **2x10=20m**

15. What is transport? Explain the different types of transport.
16. What are the factors that should be considered in choosing the mode of transport for Physical distribution of goods.
17. What is Ware house? How Warehouses establish growth prospects of a Nation by Storing goods.

---All the Best---