Section A (10 Marks)

1. Define the following terms:

     ○ a) Circle
     ○ b) Radius
     ○ c) Diameter
     ○ d) Chord
     ○ e) Secant
2. State the Tangent Theorem.

3. Two concentric circles are of radii 5 cm and 3 cm. Find the length of the chord of the larger circle which touches the smaller circle.
4. Prove that the lengths of tangents drawn from an external point to a circle are equal.

5. In a circle with center O, a chord AB is drawn. The tangents at A and B intersect at P. Prove that $\angle AOP = 2\angle APB$.

Section B (10 Marks)

6. In a circle with center O, a chord AB is drawn. The tangents at A and B intersect at P. If $\angle APB = 40°$, find $\angle AOB$.
7. In a circle with center O, a chord AB is drawn. The tangents at A and B intersect at P. If $\angle AOB = 100°$, find $\angle APB$.
8. Prove that the angle between a tangent and a chord drawn through the point of contact is equal to the angle in the alternate segment.
9. In a circle with center O, a chord AB is drawn. The tangents at A and B intersect at P. If PA = 5 cm and the radius of the circle is 3 cm, find the length of AB.
10. In a circle with center O, two chords AB and CD intersect at point P. If AP = 4 cm, PB = 6 cm, and CP = 3 cm, find PD.