TEST PAPER: MATHEMATICS

**Time:** 50 Minutes   **Class:** 9th C.B.S.E.

Max. Marks: 30 Marks   **Date:** 12th September, 2018

Marking Scheme: *Three questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question 1:

a. AD is a diameter of a circle and AB is a chord. If AB = 30 cm and its perpendicular distance from the centre of the circle is 8 cm, then what is the length of the diameter AD?
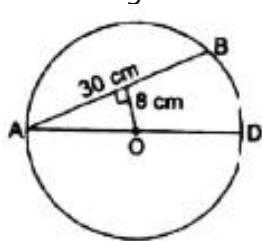

b. What is the length of a chord which is at a distance of 4 cm from the centre of a circle of radius 5 cm?

c. A chord AB of a circle with centre O is 10 cm. If the chord is 12 cm away from centre, then what is the radius of the circle?

Question 2:

a. The area of triangle ABC is 15 cm sq. If ΔABC and a parallelogram ABPD are on the same base and between the same parallel lines then what is the area of parallelogram ABPD.

b. The area of parallelogram PQRS is 88 cm sq. A perpendicular from S is drawn to intersect PQ at M. If SM = 8 cm, then find the length of PQ.

c. i. Show that the angles in the same segment of a circle are equal.
   ii. Prove that equal chords of a circle (or congruent circles) are equidistant from the centre (or centres).

Question 3:

a. In the figure, if ∠ACB = 35°, then find the measure of ∠OAB.
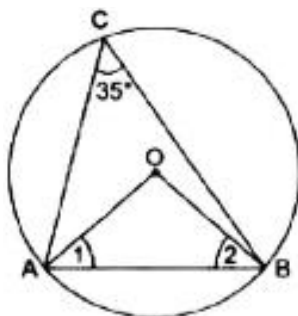
b. The radius of a circle is 17 cm. A chord of length 30 cm is drawn. Find the distance of the chord from the centre.

c. AB and CD are two parallel chords of a circle which are on opposite sides of the centre such that AB = 24 cm and CD = 10 cm and the distance between AB and CD is 17 cm. Find the radius of the circle.