INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF MATHEMATICS
CLASS IX
WORKSHEET No.11
CIRCLES

Section A (1 mark each)

1. AD is the diameter of a circle of radius 17cm and AB is of length 30 cm. Find the distance of AB from the centre.   (CBSE 2010)   (8 cm)

2. In fig1, $\angle$ OAB = 35^0, find $\angle$ ACB   (NCERT EXEMPLAR)

    (55^0)

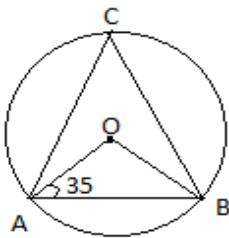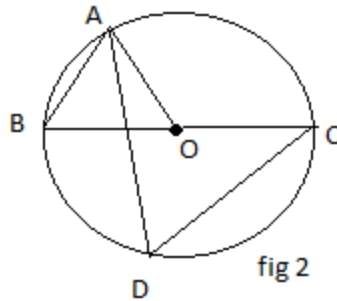3. In fig2, BC is the diameter of the circle and $\angle$BAO= 60^0. Find $\angle$ADC.   (60^0)

fig 1   fig 2   fig 3
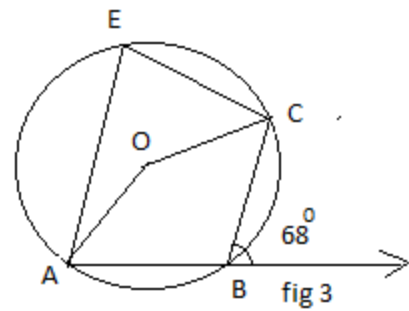
Section B (2 marks each)

                                                                                                            (68^0,

4. In fig3, O is the centre of a circle. Determine (i) $\angle$AEC   (ii) reflex $\angle$AOC 224^0)

5. In fig4, O is the centre of the circle. $\angle$OAB = 20^0, $\angle$OCB = 55^0. Find $\angle$BOC and $\angle$AOC   (70^0,
                                                                                                            70^0)

6. In fig5, O is the centre of the circle. Prove that $\angle$XOZ = 2($\angle$XZY + $\angle$YXZ)

                                                                                                (CBSE 2010)

Section C (3 marks each)

7. In fig6, PQ is a diameter of a circle with centre O. If $\angle$PQR = 65^0 $\angle$SPR = 40^0, find $\angle$QPR, $\angle$PRS and   (25^0,25^0,
    $\angle$SOR. 80^0)
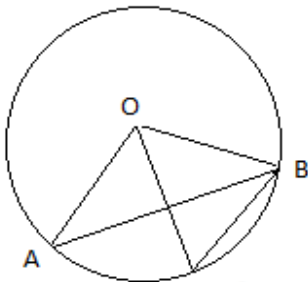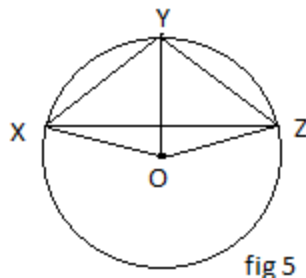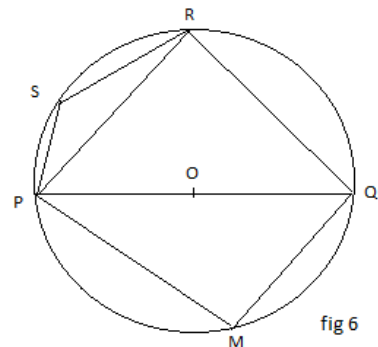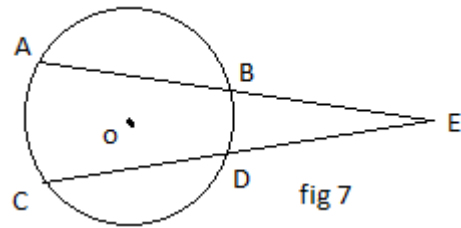

fig 4   fig 5   fig 6

8. AB and CD are two parallel chords of a circle, which is on opposite sides of the centre, such that
    AB = 10 cm and CD= 24 cm and the distance between the chords is 17 cm. find the radius of the   (13cm)
    circle.   (CBSE 2012)

9. Two equal chords AB and CD of a circle with centre O, when produced meet at a point E as shown in fig 7. Prove that BE= DE and AE= CE.

fig 7

Section D (4 marks each)

10. In a circle of radius 5cm, AB and AC are two chords such that AB = AC = 6 cm. Find the length of the chord BC.   (CBSE 2014)   (9.6 cm)

11. If BC is a diameter of a circle of centre O and OD is perpendicular to the chord AB of a circle, show that CA = 2 OD

12. AB and CD are two chords of a circle of radius r such that AB = 2AC. If p and q are distances of AB and AC from the centre, show that $p^2 + 3r^2 = 4q^2$.   (CBSE 2015)