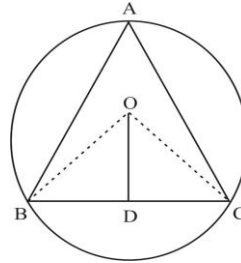**National Institute of Open Schooling (NIOS)**
Secondary Course
Lesson –16: Angles in a Circle and Cyclic Quadrilaterals
Worksheet – 16

1. Prove that angle in a semicircle is a right angle.

2. In figure, 'O' is the Circumcentre of the ΔABC and D is the mid-point of the base BC. Prove that $\angle BOD = \angle A$

3. Prove that a cyclic parallelogram is a rectangle.

4. If the non-parallel sides of a trapezium are equal, prove that it is cyclic trapezium.

5. ABCD is cyclic quadrilateral in which AC and BD are its diagonals. If $\angle DBC = 55^0$ and $\angle BAC = 45^0$, find $\angle BCD$

6. Prove that the sum of the opposite angles of a cyclic quadrilateral is 180^0

7. Prove that quadrilateral formed by angle bisectors of a cyclic quadrilateral is also cyclic.

8. ABCD is a cyclic quadrilateral, if angle C = angle B = 55^0, find the angle A and angle D

9. Two circles intersect in A and B. AC and AD are diameter of the circles. Prove that C, B and D are collinear.

10. Justify that three collinear points are neither **Concyclic** nor **noncyclic**