Exercise 11B

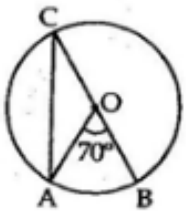
Question 2:

(i)

The angle subtended by an arc of a circle at the centre is double the angle subtended by the arc at any point on the circumference.

$\therefore \quad \angle AOB = 2\angle OCA$

$\Rightarrow \quad \angle OCA = \frac{70}{2} = 35^\circ \qquad [\because \angle AOB = 70^\circ]$



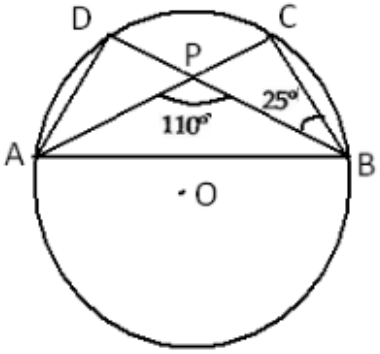
(ii) The radius of the circle is

$OA = OC$

$\Rightarrow \angle OAC = \angle OCA$ [base angles of an isosceles triangle are equal

$\Rightarrow \angle OAC = 35^\circ$ [as $\angle OCA = 35^\circ$]

Question 3:



It is clear that $\angle ACB = \angle PCB$

Consider the triangle ΔPCB.

Applying the angle sum property, we have,

$\angle PCB = 180^\circ - (\angle BPC + \angle PBC)$

$= 180^\circ - (180^\circ - 110^\circ + 25^\circ)$ [$\angle APB$ and $\angle BPC$ are linear pair; $\angle PBC = 25^\circ$, given]

$= 180^\circ - (70^\circ + 25^\circ)$

$\angle PCB = 180^\circ - 95^\circ = 85^\circ$

Angles in the same segment of a cirlce are equal.

$\therefore \angle ADB = \angle ACB = 85^\circ$

********** END **********