

SATISH CHANDRA MEMORIAL SCHOOL

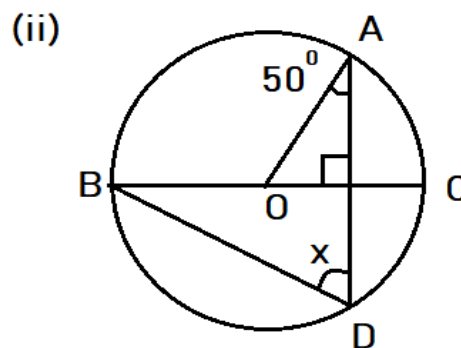
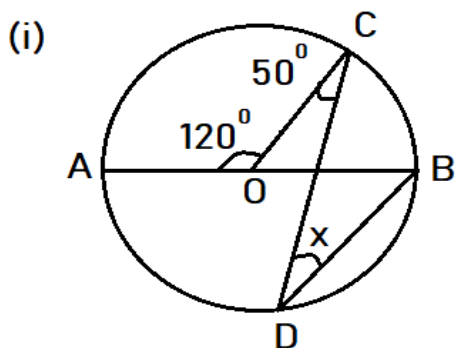
IX

MATHEMATICS PRACTICE TEST (2024-25)

(HOTS QUESTIONS)

Maximum marks: 16

- 1) (a) What is the total surface area of a cone, whose radius is $\frac{r}{3}$ and slant height is '3l' [3]
(b) If the radius of a sphere is 2r, then what is its volume? [1]
- 2) E is the midpoint of median AD of $\triangle ABC$ and BE is produce to meet AC at F. Show that $AF = \frac{1}{3}AC$. [4]
- 3) If O be the centre of the circle, find the value of x in each of the following figures. [2x2=4]



- 4) AB and AC are two chords of a circle of radius r such that $AB=2AC$. If p and q are the distances of AB and AC from the centre, prove that $4q^2 = p^2 + 3r^2$. [4]