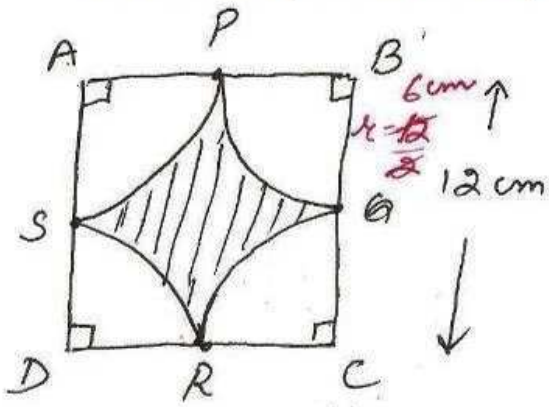


(11)



area of shaded region

$$= \text{area (sq.)} - \text{area of 4 quad.}$$

$$= s^2 - 4 \times \frac{\pi r^2}{4}$$

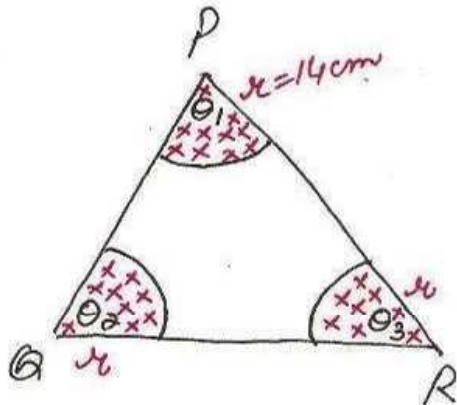
$$= 12^2 - 3.14 \times 6 \times 6$$

$$= 36(4 - 3.14)$$

$$= 36 \times 0.86$$

$$= 30.96 \text{ cm}^2$$

(13)



area of shaded region

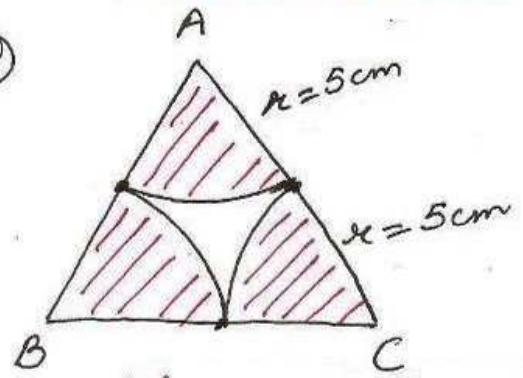
$$= \frac{\pi r^2 \theta_1}{360} + \frac{\pi r^2 \theta_2}{360} + \frac{\pi r^2 \theta_3}{360}$$

$$= \frac{\pi r^2}{360} (\theta_1 + \theta_2 + \theta_3)$$

$$= \frac{11}{7 \times 360} \times 14 \times 14 (180) \quad \left[\begin{array}{l} \text{angle sum property} \\ \text{of triangle} \end{array} \right]$$

$$= 308 \text{ cm}^2$$

(12)



Triangle ABC is equilateral

Each central angle = 60°

area of shaded region

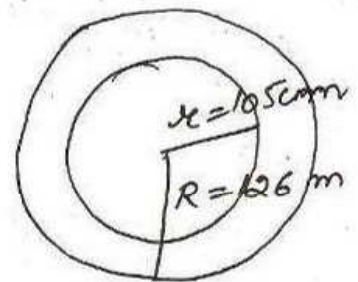
$$= \text{area of 3 sectors}$$

$$= \pi r^2 \frac{\theta}{360} \times 3$$

$$= 3.14 \times 5 \times 5 \times \frac{60}{360} \times 3$$

$$= 39.25 \text{ cm}^2$$

(14)



NCERT Exemplar Solutions by Dev Anoop (Bathinda)

area of road

$$= \pi R^2 - \pi r^2$$

$$= \pi (R^2 - r^2)$$

$$= \frac{22}{7} (126^2 - 105^2)$$

$$= \frac{22}{7} \times (126 - 105)(126 + 105)$$

$$= \frac{22}{7} \times 21 \times 231$$

$$= 15246 \text{ m}^2$$