



Question 10:

Area of first circle =  $\pi r^2 = 962.5 \text{ cm}^2$

$$r^2 = \left( 962.5 \times \frac{7}{22} \right) \text{ cm}$$

$$r^2 = 306.25$$

$$r = 17.5 \text{ cm}$$

Area of second circle =  $\pi R^2 = 1386 \text{ cm}^2$

$$R^2 = \left( 1386 \times \frac{7}{22} \right) \text{ cm}$$

$$R^2 = 441$$

$$\Rightarrow R = 21 \text{ cm}$$

Width of ring  $R - r = (21 - 17.5) \text{ cm} = 3.5 \text{ cm}$

Question 11:

$$\begin{aligned} \text{Area of outer circle} &= \pi r_1^2 = \left( \frac{22}{7} \times 23 \times 23 \right) \text{ cm}^2 \\ &= 1662.5 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Area of inner circle} &= \pi r_2^2 = \left( \frac{22}{7} \times 12 \times 12 \right) \text{ cm}^2 \\ &= 452.2 \text{ cm}^2 \end{aligned}$$

Area of ring = Outer area - inner area

$$= (1662.5 - 452.5) \text{ cm}^2 = 1210 \text{ cm}^2$$

Question 12:

Inner radius of the circular park = 17 m

Width of the path = 8 m

Outer radius of the circular park =  $(17 + 8) \text{ m} = 25 \text{ m}$

Area of path =  $\pi[(25)^2 - (17)^2] = \text{cm}^2$

$$= \pi(25 + 17)(25 - 17) \text{ m}^2$$

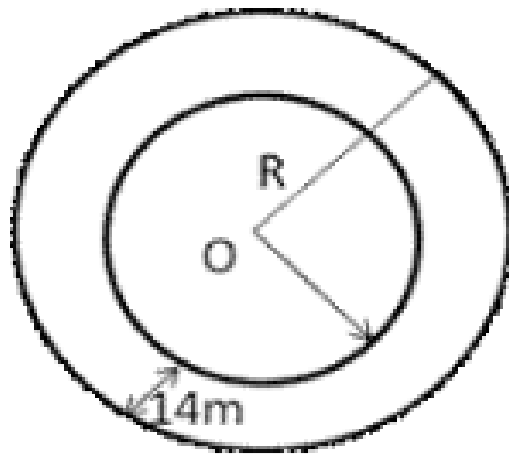
$$= \left[ \frac{22}{7} \times 42 \times 8 \right] \text{ m}^2$$

Area =  $1056 \text{ m}^2$

Question 13:

Let the inner and outer radii of the circular tracks be  $r$  meter and  $R$

meter respectively. Then  
Inner circumference = 440 meter



$$\Rightarrow 2\pi r = 440$$

$$2 \times \frac{22}{7} \times r = 440$$

$$\Rightarrow r = 70 \text{ m}$$

Since the track is 14 m wide every where.

Therefore,

Outer radius  $R = r + 14\text{m} = (70 + 14) \text{ m} = 84 \text{ m}$

Outer circumference =  $2\pi R$

$$= \left( 2 \times \frac{22}{7} \times 84 \right) \text{ m} = 528 \text{ m}$$

Rate of fencing = Rs. 5 per meter

Total cost of fencing = Rs.  $(528 \times 5)$  = Rs. 2640

Area of circular ring =  $\pi R^2 - \pi r^2$

$$= \pi (84^2 - 70^2) = \frac{22}{7} \times 2156 = 6776 \text{ m}^2$$

Cost of levelling = Rs 0.25 per  $\text{m}^2$

Cost of levelling the track = Rs  $(6776 \times 0.25)$  = Rs. 1694

\*\*\*\*\* END \*\*\*\*\*