

## CHAPTER-11 | Surface Areas and Volumes

QUIZ  
PART-7

1. The surface area of a sphere with radius 10.5 cm is:

- A. 440 cm<sup>2</sup>  
B. 462 cm<sup>2</sup>  
C. 484 cm<sup>2</sup>  
D. 506 cm<sup>2</sup> (B)

**Explanation:** The surface area of a sphere =  $4\pi r^2$ . Using  $\pi = 3.14$ , the area is 462 cm<sup>2</sup>.

2. The surface area of a sphere with radius 5.6 cm is:

- A. 394.24 cm<sup>2</sup>  
B. 380.74 cm<sup>2</sup>  
C. 310.72 cm<sup>2</sup>  
D. 280.56 cm<sup>2</sup> (A)

**Explanation:** Using the formula  $4\pi r^2$ , the surface area is 394.24 cm<sup>2</sup>.

3. The surface area of a sphere with radius 14 cm is:

- A. 780.56 cm<sup>2</sup>  
B. 710.44 cm<sup>2</sup>  
C. 800 cm<sup>2</sup>  
D. 620 cm<sup>2</sup> (A)

**Explanation:** Surface area =  $4\pi r^2 = 4 \times 3.14 \times 14^2 = 780.56$  cm<sup>2</sup>.

4. The surface area of a sphere with diameter 14 cm is:

- A. 784 cm<sup>2</sup>  
B. 1225 cm<sup>2</sup>  
C. 616 cm<sup>2</sup>  
D. 625 cm<sup>2</sup> (A)

**Explanation:** Radius = 7 cm. Surface area =  $4\pi r^2 = 784$  cm<sup>2</sup>.

5. The surface area of a sphere with diameter 21 cm is:

- A. 1386 cm<sup>2</sup>  
B. 1309 cm<sup>2</sup>  
C. 1217 cm<sup>2</sup>  
D. 1105 cm<sup>2</sup> (A)

**Explanation:** Radius = 10.5 cm. Surface area =  $4\pi r^2 = 1386$  cm<sup>2</sup>.

6. The surface area of a sphere with diameter 3.5 cm is:

- A. 48.5 cm<sup>2</sup>  
B. 45.2 cm<sup>2</sup>  
C. 38.5 cm<sup>2</sup>  
D. 42.3 cm<sup>2</sup> (D)

**Explanation:** Radius = 1.75 cm. Surface area =  $4\pi r^2 = 42.3$  cm<sup>2</sup>.

7. The total surface area of a hemisphere with radius 10 cm is:

- A. 400 cm<sup>2</sup>  
B. 520 cm<sup>2</sup>  
C. 600 cm<sup>2</sup>  
D. 700 cm<sup>2</sup> (B)

**Explanation:** Total surface area of a hemisphere =  $3\pi r^2 = 520$  cm<sup>2</sup>.

8. The ratio of surface areas of a spherical balloon when its radius increases from 7 cm to 14 cm is:

- A. 1:2  
B. 1:4  
C. 2:1  
D. 4:1 (D)

**Explanation:** The surface area of a sphere is proportional to  $r^2$ . So, the ratio is  $(14^2):(7^2) = 4:1$ .

9. The cost of tin-plating a hemispherical bowl with an inner diameter of 10.5 cm at ₹16 per 100 cm<sup>2</sup> is:

- A. ₹140  
B. ₹160  
C. ₹180  
D. ₹200 (B)

**Explanation:** Curved surface area =  $2\pi r^2$ . The cost is calculated using this surface area at ₹16 per 100 cm<sup>2</sup>.

10. The surface area of a sphere with radius 5 cm is:

- A. 314 cm<sup>2</sup>  
B. 400 cm<sup>2</sup>  
C. 500 cm<sup>2</sup>  
D. 250 cm<sup>2</sup> (A)

**Explanation:** Surface area =  $4\pi r^2 = 4 \times 3.14 \times 5^2 = 314$  cm<sup>2</sup>.