

## CHAPTER-12 | SURFACE AREAS AND VOLUMES

QUIZ  
PART-02

1. Two cubes of volume  $64 \text{ cm}^3$  joined end to end. The surface area of the resulting cuboid is:
- A.  $352 \text{ cm}^2$   
B.  $366 \text{ cm}^2$   
C.  $380 \text{ cm}^2$   
D.  $396 \text{ cm}^2$  (B)

**Explanation:** The surface area is calculated by considering the resulting cuboid's dimensions.

2. A hollow hemisphere and cylinder vessel with diameter  $14 \text{ cm}$  and height  $13 \text{ cm}$  has an inner surface area of:
- A.  $300 \text{ cm}^2$                       B.  $400 \text{ cm}^2$   
C.  $500 \text{ cm}^2$                       D.  $600 \text{ cm}^2$  (A)

**Explanation:** The inner surface area involves both the curved surface area of the hemisphere and cylinder.

3. A toy made of a cone and hemisphere, both with radius  $3.5 \text{ cm}$  and height  $15.5 \text{ cm}$ . The total surface area is:
- A.  $90 \text{ cm}^2$                       B.  $100 \text{ cm}^2$   
C.  $120 \text{ cm}^2$                       D.  $130 \text{ cm}^2$  (B)

**Explanation:** The total surface area is the sum of the cone and hemisphere surface areas.

4. A cubical block of side  $7 \text{ cm}$  has a hemisphere surmounted on it. The greatest diameter of the hemisphere is:
- A.  $7 \text{ cm}$                       B.  $14 \text{ cm}$   
C.  $21 \text{ cm}$                       D.  $28 \text{ cm}$  (B)

**Explanation:** The diameter of the hemisphere equals the side length of the cube, so it is  $14 \text{ cm}$ .

5. A hemispherical depression is cut from a cubical block. The surface area of the remaining solid is:
- A.  $196 \text{ cm}^2$                       B.  $256 \text{ cm}^2$   
C.  $300 \text{ cm}^2$                       D.  $324 \text{ cm}^2$  (B)

**Explanation:** The surface area is calculated by subtracting the area of the hemisphere's base from the cube's face.

6. A medicine capsule is shaped like a cylinder with two hemispheres at each end. The surface area is:
- A.  $75 \text{ mm}^2$   
B.  $90 \text{ mm}^2$   
C.  $100 \text{ mm}^2$   
D.  $120 \text{ mm}^2$  (B)

**Explanation:** The surface area is the sum of the lateral surface areas of the cylinder and two hemispheres.

7. A tent has a cylindrical base and conical top. The area of canvas used is:
- A.  $45.5 \text{ m}^2$                       B.  $50.5 \text{ m}^2$   
C.  $55.5 \text{ m}^2$                       D.  $60.5 \text{ m}^2$  (A)

**Explanation:** The area is the sum of the lateral areas of the cone and cylinder, excluding the base.

8. A cylinder with a conical cavity has a total surface area of:
- A.  $16 \text{ cm}^2$                       B.  $18 \text{ cm}^2$   
C.  $20 \text{ cm}^2$                       D.  $22 \text{ cm}^2$  (B)

**Explanation:** The surface area is the sum of the cylinder's curved surface and the conical surface, minus the base.

9. A wooden article is made by scooping a hemisphere from each end of a solid cylinder. The total surface area is:
- A.  $300 \text{ cm}^2$   
B.  $350 \text{ cm}^2$   
C.  $400 \text{ cm}^2$   
D.  $450 \text{ cm}^2$  (A)

**Explanation:** The surface area involves the cylinder's curved surface and the two hemispherical surfaces.

10. A sphere with radius  $7 \text{ cm}$  has a surface area of:
- A.  $154 \text{ cm}^2$                       B.  $196 \text{ cm}^2$   
C.  $220 \text{ cm}^2$                       D.  $250 \text{ cm}^2$  (B)

**Explanation:** The surface area of the sphere is  $4\pi r^2 = 196 \text{ cm}^2$ .