

CHAPTER-11 | : Surface Areas and Volumes

QUIZ
PART-10

1. The volume of a cone with radius 6 cm and height 7 cm is:

- A. 756 cm^3
B. 672 cm^3
C. 804 cm^3
D. 324 cm^3 (B)

Explanation: Volume of cone = $(1/3)\pi r^2 h = (1/3) \times 3.14 \times 6^2 \times 7 = 672 \text{ cm}^3$.

2. The volume of a cone with radius 3.5 cm and height 12 cm is:

- A. 462 cm^3
B. 498 cm^3
C. 483 cm^3
D. 462.5 cm^3 (A)

Explanation: Volume = $(1/3)\pi r^2 h = (1/3) \times 3.14 \times (3.5)^2 \times 12 = 462 \text{ cm}^3$.

3. The capacity in liters of a conical vessel with radius 7 cm and slant height 25 cm is:

- A. 2.04 L
B. 3.14 L
C. 1.76 L
D. 4.12 L (A)

Explanation: Using the volume formula for a cone, convert cm^3 to liters.

4. If the height of a cone is 15 cm and its volume is 1570 cm^3 , the radius of the base is:

- A. 5 cm
B. 6 cm
C. 7 cm
D. 8 cm (C)

Explanation: Using volume formula: radius = $\sqrt{(3 \times \text{volume} / (\pi \times \text{height}))}$.

5. The volume of a right circular cone with height 9 cm is $48\pi \text{ cm}^3$. The diameter of its base is:

- A. 8 cm
B. 12 cm
C. 18 cm
D. 16 cm (B)

Explanation: Using the formula for volume and solving for diameter.

6. The capacity of a conical pit with a top diameter of 3.5 m and depth 12 m is:

- A. 37.5 kilolitres
B. 35 kilolitres
C. 45 kilolitres
D. 50 kilolitres (A)

Explanation: The volume is calculated using the cone volume formula, then converted to kilolitres.

7. The slant height of a cone with radius 4 cm and volume 188 cm^3 is:

- A. 9 cm
B. 8 cm
C. 7 cm
D. 6 cm (A)

Explanation: Using volume formula to calculate slant height.

8. A conical tank has a radius of 7 m and a height of 24 m. Its volume is:

- A. 924 m^3
B. 1045 m^3
C. 1234 m^3
D. 892 m^3 (A)

Explanation: Volume = $(1/3)\pi r^2 h$, calculate using the given radius and height.

9. A conical tent has a height of 10 m and radius 6 m. The volume of the tent is:

- A. 200 m^3
B. 400 m^3
C. 600 m^3
D. 800 m^3 (B)

Explanation: Volume = $(1/3)\pi r^2 h$, using the given dimensions.

10. The volume of a conical tank with height 8 cm and radius 4 cm is:

- A. 134.4 cm^3
B. 150.8 cm^3
C. 200.5 cm^3
D. 250 cm^3 (A)

Explanation: Using the cone volume formula, the volume is 134.4 cm^3 .