## Volume of a Right Circular

# A. Choose the correct answer:

1. The formula for the volume of a right circular cylinder is:

a) πr²h	b) 2πrh
c) πr³h	d) 2πr²

- 2. If the radius of a cylinder is 7 cm and the height is 10 cm, the volume is:
  - a) 1540 cm<sup>3</sup> b) 154 cm<sup>3</sup>
  - c) 220 cm<sup>3</sup> d) 440 cm<sup>3</sup>
- 3. When the height of a cylinder is doubled, its volume:
  - a) Doubles b) Triples
  - c) Remains the same d) Becomes half

4. If the volume of a cylinder is 616 cm<sup>3</sup> and the height is 8 cm, the radius is:

- a) 7 cm b) 14 cm
- c) 8 cm d) 6 cm
- 5. The volume of a cylinder depends on:
  - a) Radius only b) Height only
  - c) Radius and height both d) None of these

### **B.** Write the Missing Terms to Complete the Sentences:

- 1. Volume of a cylinder = × radius<sup>2</sup> × height
- If the height of a cylinder is halved, the volume becomes \_\_\_\_\_
- 3. Volume of a cylinder is measured in \_\_\_\_\_ units
- 4. In the formula for volume of a cylinder,  $\pi$  is approximately equal to
- 5. If radius is doubled, volume increases \_\_\_\_\_\_ times

#### C. Figure out the answers to these questions:

- 1. Find the volume of a cylinder with radius 5 cm and height 12 cm.
- 2. A cylinder has volume 1256 cm<sup>3</sup> and radius 7 cm Find its height.
- 3. Calculate the volume of a cylinder with diameter 14 cm and height 10 cm.
- 4. Find the volume of a cylinder whose radius is 3.5 cm and height is 20 cm.
- 5. A cylindrical water tank has a radius of 2 m and a height of 7 m Find its volume.

#### D. Mark each sentence with a True ( $\checkmark$ ) or False (X):

- 1. Volume of a cylinder is given by  $\pi r^2h$ .
- 2. The volume of a cylinder increases if the height decreases.
- 3. Volume is always expressed in cubic units.
- 4. If the radius of a cylinder is doubled, the volume becomes eight times. \_\_\_\_\_
- 5. A cylinder and a cuboid with same height and base area will have the same volume. \_\_\_\_\_

#### E. Challenge yourself with these questions:

- 1. Find the volume of a cylinder with radius 6 cm and height 15 cm.
- 2. A cylindrical pipe has a diameter of 10 cm and length 2 m Find its volume.
- 3. Find the volume of a cylinder whose height is 21 cm and radius is 5 cm.
- 4. A cylinder has volume 4620 cm<sup>3</sup> and radius 7 cm Find its height.
- 5. Calculate the volume of a cylinder with radius 12 cm and height 10 cm.