1. What is the formula for the curved surface area of a cone?

   A. πr^2 B. πrl

   C. $2\pi r^2$ D. $\pi r(l + r)$ (B)

Explanation : The curved surface area of a cone is πrl, where r is the base radius and l is the slant height.

2. If the radius of the base of a cone is 7 cm and the slant height is 10 cm, what is its curved surface area?

   A. 210 cm^2 B. 220 cm^2

   C. 230 cm^2 D. 240 cm^2 (B)

Explanation : CSA = πrl = (22/7) × 7 × 10 = 220 cm^2.

3. Which of the following represents the total surface area of a cone?

   A. πrl B. πr^2

   C. $\pi r(l + r)$ D. $2\pi rl$ (C)

Explanation : Total Surface Area of a cone is $\pi r(l + r)$, including base and curved surface.

4. What is the formula for the surface area of a sphere?

   A. $2\pi r^2$ B. $3\pi r^2$

   C. $4\pi r^2$ D. πr^2 (C)

Explanation : The surface area of a sphere is given by $4\pi r^2$.

5. If the radius of a hemisphere is r, what is its total surface area?

   A. $2\pi r^2$ B. $3\pi r^2$

   C. $4\pi r^2$ D. πr^2 (B)

Explanation : Total surface area of a hemisphere = $3\pi r^2$ (curved + base).

6. What is the volume of a right circular cone?

   A. πr^2h B. $(1/2)\pi r^2h$

   C. $(1/3)\pi r^2h$ D. $(2/3)\pi r^2h$ (C)

Explanation : The volume of a cone is $(1/3)\pi r^2h$.

7. A sphere has a radius of 7 cm. What is its surface area?

   A. 154 cm^2 B. 308 cm^2

   C. 616 cm^2 D. 1232 cm^2 (C)

Explanation : Surface area = $4\pi r^2$ = 4 × (22/7) × 7 × 7 = 616 cm^2.

8. Which of the following is the volume of a sphere?

   A. $(1/3)\pi r^3$ B. $(2/3)\pi r^3$

   C. $(3/4)\pi r^3$ D. $(4/3)\pi r^3$ (D)

Explanation : The volume of a sphere is $(4/3)\pi r^3$.

9. If the slant height of a cone is l and radius is r, which expression gives the curved surface area?

   A. πrl B. πr^2

   C. πl^2 D. $\pi r(l + r)$ (A)

Explanation : Curved surface area = πrl.

10. What is the volume of a hemisphere of radius r?

    A. $(1/2)\pi r^3$ B. $(2/3)\pi r^3$

    C. $(3/4)\pi r^3$ D. $(4/3)\pi r^3$ (B)

Explanation : Volume of a hemisphere = $(2/3)\pi r^3$.