1. A toy in the shape of a cone has a height of 12 cm and a base radius of 5 cm. What is the slant height of the cone?
   A. 13 cm
   B. 14 cm
   C. 15 cm
   D. 16 cm (A)

Explanation : Using Pythagoras theorem, the slant height $l = \sqrt{12^2 + 5^2} = 13$ cm

2. The total surface area of a cone with radius 7 cm and slant height 25 cm is:
   A. 560 cm^2
   B. 700 cm^2
   C. 800 cm^2
   D. 900 cm^2 (B)

Explanation: Total Surface Area $T.S.A = \pi r(r+l) = 22/7 \times 7 \times (7+25) = 700$ cm

3. The volume of a cone with radius 4 cm and height 9 cm is:
   A. 36π cm^3
   B. 45π cm^3
   C. 48π cm^3
   D. 50π cm^3 (A)

Explanation: Volume= $\frac{1}{3}\pi r^2 h = \frac{1}{3} * \frac{22}{7} * 4^2 * 9 = 36\pi$ cm^3

4. The lateral surface area of a cylinder with radius 6 cm and height 14 cm is:
   A. 528 cm^2
   B. 540 cm^2
   C. 552 cm^2
   D. 564 cm^2 (B)

Explanation: Lateral Surface Area $C.S.A = 2\pi rh = 2 \times 2 \times 2/7 \times 6 \times 14 = 540$ cm^2

5. The volume of a hemisphere with radius 3 cm is:
   A. 36π cm^3 B. 54π cm^3
   C. 72π cm^3 D. 108π cm^3 (B)

Explanation : Volume of Hemisphere = $\frac{2}{3}\pi r^3 = 2/3 \times 22/7 \times 3^3 = 54\pi$ cm^3.

6. The surface area of a hemisphere with radius 5 cm is:
   A. 75π cm^2
   B. 100π cm^2
   C. 125π cm^2
   D. 150π cm^2 (A)

Explanation : Surface Area of Hemisphere $= 3\pi r^2 = 3 \times 22/7 \times 5^2 = 75\pi$ cm^2

7. The volume of a cylinder with radius 7 cm and height 10 cm is:
   A. 154π cm^3
   B. 170π cm^3
   C. 175π cm^3
   D. 180π cm^3 (C)

Explanation : Volume of Cylinder $= \pi r^2 h = 22/7 \times 7^2 \times 10 = 175\pi$ cm^2

8. The total surface area of a cylinder with radius 4 cm and height 6 cm is:
   A. 128π cm^2
   B. 136π cm^2
   C. 144π cm^2
   D. 152π cm^2 (B)

Explanation : Total Surface Area $= 2\pi r(r+h) = 22/7 \times 4 \times (4+6) = 136\pi$ cm^2.

9. The slant height of a cone with radius 3 cm and height 4 cm is:
   A. 5 cm
   B. 6 cm
   C. 7 cm
   D. 8 cm (A)

Explanation : Slant height $l = \sqrt{h^2 + r^2} = \sqrt{4^2 + 3^2} = 5cm$

10. The curved surface area of a hemisphere with radius 6 cm is:
    A. 72π cm^2
    B. 80π cm^2
    C. 90π cm^2
    D. 100π cm^2 (A)

Explanation : Curved Surface Area $= 2\pi r^2 = 2 \times 22/7 \times 6^2 = 72\pi$ cm^2.