

Mensuration

1. Curved surface area of a cone whose radius is 21cm is 1914 cm^2 . If height of cone is half than that of perimeter of a square, then find the area of square?
(A) 36 cm^2 (B) 196 cm^2
(C) 100 cm^2 (D) 64 cm^2
(E) 144 cm^2
2. If volume of cone is 2156 and ratio of radius to height of cone in 4 : 3, then find the volume of cylinder which radius is 50% more than radius of cone and height equal to height of cone?
(A) 14555 cm^2 (B) 14558 cm^2
(C) 14565 cm^2 (D) 14553 cm^2
(E) 14559 cm^2
3. Sum of volume of cylinder (S) and volume of cone (C) is $2190\pi \text{ cm}^2$ & height of both cylinder and cone is same i.e, 10 cm. If radius of cone is 15 cm then find the ratio of radius of S to radius of C?
(A) 1 : 2 (B) 3 : 4
(C) 2 : 5 (D) 4 : 5
(E) 3 : 5
4. Sum of volume of cone (A) and volume of cylinder (H) is $5040 \pi \text{ cm}^3$ and height of both cone and cylinder is same that is 20 cm. If radius of cylinder is 12 cm then find the ratio of radius of A to radius of H.
(A) 3 : 2 (B) 3 : 5
(C) 5 : 3 (D) 2 : 3
(E) 4 : 3
5. A circus tent is cylindrical up to a height of 3 m and conical above it. If its diameter is 105m and the slant height of the conical part is 63 m, then the total area of the canvas required to make the tent is-
(take $\pi = \frac{22}{7}$)
(A) 11385 m^2 (B) 10395 m^2
(C) 9900 m^2 (D) 990 m^2
6. Volume of sphere and cylinder are equal and the radius of both is same. Find volume of cone whose base radius and height is same as that of cylinder?(Given height of cylinder is 16cm)
(A) $768\pi \text{ cm}^2$ (B) $756\pi \text{ cm}^3$
(C) $748\pi \text{ cm}^3$ (D) $786\pi \text{ cm}^3$
(E) None of these
7. The surface area of the sphere is 616 cm^2 . Find the perimeter of the square if the diameter of the sphere is two times of the side of the square.
(A) 35 cm (B) 28 cm
(C) 21 cm (D) 42 cm
(E) 49 cm
8. A hemispherical bowl of internal diameter 54 cm contains a liquid. This liquid is to be filled in cylindrical bottles of radius 3 cm and height 9 cm. How many bottles are required to empty the bowl?
(A) 221 (B) 343
(C) 81 (D) 243
(E) None of these
9. A sphere is melted and molded into solid cylinder. If radius of both solids are equal, then find the ratio of total surface area of sphere to total surface area of cylinder.
(A) 2 : 3 (B) 5 : 3
(C) 4 : 3 (D) 6 : 7
(E) 7 : 6
10. A hemisphere is mounted on cylinder and the radius of both is same i.e. 7 cm. Find the height of cylinder if the total volume of hemisphere and cylinder is $3952\frac{2}{3} \text{ cm}^3$?
(A) 21 cm (B) 14 cm
(C) $17\frac{1}{2} \text{ cm}$ (D) 28 cm
(E) None of these

11. The surface area of a spherical part of a hemispherical bowl with a flat circular detachable cover, excluding the cover, is 616 sq cm. The area of the cover is 38.5 sq cm. What is the volume of the bowl?
- (A) 1339 cm^3 (B) 1430 cm^3
(C) 1570 cm^3 (D) 1096.69 cm^3
(E) 2032.69 cm^3