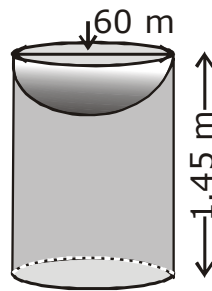
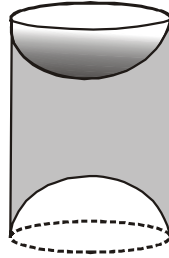


SURFACE AREAS AND VOLUMES**CYLINDER****EXERCISE**

- Q.1** From a solid cylinder whose height is 2.4 cm and diameter 1.4 cm, a conical cavity of same height and same diameter is hollowed out. Find the total surface area of the remaining solid to the nearest cm^2 .
- Q.2** Rashmi made a bird-bath for her garden in the shape of a cylinder with a hemispherical depression at one end (as shown in the adjoining figure). The height of the cylinder is 1.45 m and its diameter is 60 cm. Find the total surface area of the bird-bath.



- Q.3** A juice seller was serving his customers using glasses as shown in the adjoining figure. The inner diameter of the cylindrical glass was 5 cm, but the bottom of the glass had a hemispherical portion raised which reduced the capacity of the glass. If the height of a glass was 10 cm, find the apparent capacity of the glass and its actual capacity. (Use $\pi = 3.14$)



- Q.4** The adjoining figure shows a medicine capsule, which is in the shape of a cylinder with two hemispheres struck to each of its ends. If the length of the capsule is 14 mm and the diameter of the capsule is 5 mm, find its surface area.



- Q.5** A *gulabjamun*, contains sugar syrup approximately 30% of its volume. Find how much syrup would be found in 45 *gulabjamuns*, each shaped like a cylinder with two hemispherical ends with lengths 5 cm and diameter 2.8 cm.
- Q.6** A spherical glass vessel has cylindrical neck 8 cm long, 2 cm in diameter, the diameter of the spherical part is 8.5 cm. Find the amount of water it can hold, taking the above as inside measurements. (Take $\pi = 3.14$)
- Q.7** A girl fills a cylindrical bucket 32 cm in height and 18 cm in radius with sand. She empties the bucket on the ground and makes a conical heap of the sand. If the height of the conical heap is 24 cm, find
- (i) the radius and
 - (ii) the slant height of the heap.
- Leave your answer in square root form.

ANSWER KEY

1. 18 cm^2
2. 3.3 m^2
3. 196.25 cm^2 ; 163.54 cm^3
4. 220 mm^2
5. 338.18 cm^3
6. 346.51 cm^3
7. (i) 36 cm (ii) 12 cm