Assignment

# Subjective Questions

1. Cubes each of volume 64 cm3 are joined end to end. Find the surface area of the resulting cuboid.
2. A pen stand made of wood is in the shape of a cuboid with four conical depressions and a cubical depression to hold the pens and pins, respectively. The dimension of the cuboid is 10 cm, 5 cm and 4 cm. The radius of each of the conical depressions is 0.5 cm, and the depth is 2.1 cm. The edge of the cubical depression is 3 cm. Find the volume of the wood in the entire stand.
3. A circular tent is cylindrical up to a height of 3 m and conical above it. If the diameter of the base of the cone and cylinder is 105 m and the slant height of the conical part is 53 m, find the total canvas used in making the tent.
4. A toy is in the form of a cone mounted on a hemisphere of common base radius 7 cm. The total height of the toy is 31 cm. Find the total surface area of the toy.
5. 50 spherical marbles, each of radius 1.4 cm, are dropped in a cylindrical vessel of radius 7 cm containing some water, which are completely immersed in water. Find the rise in the level of water in the vessel.
6. Two spheres of the same metal weigh 1 kg and 7 kg. The radius of the smaller sphere is 3 cm. The two spheres are melted to form a single big sphere. Find the diameter of the bigger sphere.
7. A hemispherical tank, of diameter 3 m, is full of water. It is being emptied by a pipe 25/7 litre per second. How much time will it take to make the tank half empty?
8. The perimeter of a right triangle is 60 cm. Its hypotenuse is 25 cm. Find the area of the triangle.
9. A hemispherical bowl of internal diameter 36 cm contains liquid. This liquid is filled into 72 cylindrical bottles of diameter 6 cm. Find the height of each bottle, if 10% liquid is wasted in this transfer.
10. Water is flowing at the rate of 2.52 km/h through a cylindrical pipe into a cylindrical tank, the radius of whose base is 40 cm, If the increase in the level of water in the tank, in half an hour is 3.15 m, find the internal diameter of the pipe.