Guess Paper – UNIT: 6 (MENSURATION)

1. The sum of circumferences of two circles is 132 cm. If the radius of one circle is 14 cm, find the radius of the second circle.

2. Find the area of the quadrant of a circle whose circumference is 22 cm. What is the surface area of the solid hemisphere of radius r cm?

3. How many spherical bullets can be made out of a solid cube of lead whose edge measures 44 cm, each bullet being 4 cm in diameter.

4. Two cubes each with 12 cm edge are joined end to end. Find the surface area of the resulting cuboid.

5. If the perimeter of a semi-circular protractor is 36 cm. Find the diameter of the protractor.

6. A drain cover is made from a square metal plate of side 40 cm by having 441 holes of diameter 1 cm, each drilled in it. Find the area of the remaining square plate.

7. Find the volume of the largest right circular cone that can be cut out of a cube whose edge is 9 cm.

8. If the radius of the base of a right circular cylinder is halved, keeping the height same, find the ratio of the volume of the reduced cylinder to that of the original cylinder.

9. Write all the formulae used in the chapters: Areas related to Circles and Surface area & Volume.

10. Two circles touch internally, the sum of their areas is 116π sq. cm. and the distance between their centres is 6 cm. Find the radii of the circles.

11. A cone, a hemisphere and a cylinder stand on equal bases and have the same height. Show that their volumes are in the ratio 1: 2: 3.

12. A shuttle cock used for playing badminton has the shape of a frustum of a cone surmounted on a hemisphere. The external diameters of the frustum are 5 cm and 2 cm, the height of the entire shuttle cock is 7 cm. Find the external surface area.

13. A cone is divided into two parts by drawing a plane through the mid point of its axis, parallel to its base. Compare the volumes of the two parts.

14. Solid spheres of diameter 6 cm are dropped into a cylindrical beaker containing some water and are fully submerged. If the diameter of the beaker is 18 cm and the water rises by 40 cm, find the number of solid spheres dropped in the water.