Chapter 11

Mensuration

Assignment No. 11

1. Tick the correct alternative:
   a. The parallel sides of a trapezium are 28 cm and 16 cm and its area is 220 cm². The distance between its parallel sides is
   i. a) 5 cm  
      b) 10 cm  
      c) 15 cm  
      d) 20 cm
   
   ii. If an edge of a cube is doubled, then its surface area will become
   a) twice  
      b) thrice  
      c) \( \frac{1}{4} \) times  
      d) four times
   
   iii. The volume of a cube of edge 0.01 m (in cm³) is
   a) 0.000001  
      b) 1  
      c) 0.001  
      d) 0.001
   
   iv. The radius of a right circular cylinder is doubled keeping its height same. The ratio between the volumes of new cylinder and the original cylinder is
   a) 3 : 1  
      b) 4 : 1  
      c) 2 : 1  
      d) 8 : 1

2. The area of a square is 42.25 m². Find the side of the square. If the tiles measuring 13 cm × 13 cm are paved on the square area, find how many tiles are required for paving it?

3. A piece of wire is the form of a rectangle whose length is 52 cm and breadth is 36 cm. It is cut at a point and bent in the form of a circle. Find the radius of the circle.

4. The carpet for a room of dimensions 7.5 m × 6 m, costs Rs. 6750 and it was made from a roll 80 cm wide. Find the cost of carpet per meter.

5. How many persons can be accommodated in a hall of length 14 m, breadth 10 m and height 4.5 m, assuming that 3.5 m³ of air is required for each person

6. A powder is available in two packs- a tin can with a square base of each side 5 cm and having height 14 cm or one with a circular base of radius 3.5 cm and having height 12 cm. Which of them has greater capacity and by how much?

7. A cuboidal tin open at the top has dimensions 20 cm × 16 cm × 14 cm. What is the total area of a sheet of metal required to make 10 such tins.

8. The circumference of the base of a right circular cylinder is 176 cm and it is 1 m high. Find the lateral surface area of the cylinder.

9. A rectangular sheet of paper 44 cm × 20 cm is rolled along its length and a cylinder is formed. Find the volume of the cylinder.

10. The diameter of a roller is 80 cm and its length is 126 cm. It takes 750 complete revolutions moving once over to level a playground. Find the area of the playground.

11. A room is 5.5 m long, 4 m wide and 3.5 m high. Find the cost of papering its walls with paper 90 cm wide at Rs 1.20 per meter.
12. A car has a petrol tank 40cm long, 28cm wide and 25cm deep. If the full consumption of the car averages 13.5km per liter, how far can the car travel with a full tank of petrol?

13. A cardboard box open from the top is 1.5 m long, 1.25 m wide and 65 cm deep. Find the area of cardboard required for making the box and the cost of cardboard required at Rs 25 per sq m.

14. A rich person wants to donate a rectangular piece of land measuring 500m length and 300m breadth. He distributes his land equally among his 5 servants.
   i. How much area does each servant get?
   ii. Do you believe in donation/charity? If yes, write one incidence when you have donated something.
   iii. Can you name the great Indian leader who started Bhoodan Movement?