Ambition Academy

Surface Areas

SECTION-A (1 mark each)

1. The dimensions of a box are 1 m, 80 cm and 50 cm. Find the area of its four walls.

2. Find the surface area of a sphere of radius 7 cm.

SECTION-B (2 marks each)

3. The diameter of a roller is 84 cm and its length a is 120 cm. it takes 500 complete revolution to move once over to level a playground. Find the area of the playground in m2.

4. The height of the cone is 16 cm and its base radius is 12 cm. find the curved surface area and the total surface area of the cone.

SECTION-C (3 marks each)

5. What length of tarpaulin 3 m wide will be required to make conical tent of height 8 m and base radius 6 m? Assume that the extra length of material that will be required for stitching margins and wastage in cutting is approximately 20 cm (Use $\pi = 3.14$).

6. Shanti Sweets Stall was placing an order for making cardboard boxes for packing their sweets. Two sizes of boxes were required. The bigger of dimensions 25 cm × 20 cm × 5 cm and the smaller of dimensions 15 cm × 12 cm × 5 cm. For all the overlaps, 5% of the total surface area is required extra. If the cost of the cardboard is Rs 4 for 1000 cm2, find the cost of cardboard required for supplying 250 boxes of each kind.

SECTION-D (4 marks each)

7. A hemispherical dome of a building needs to be painted. If the circumference of the base of the dome is 17.6m, find the cost of painting it, given the cost of painting is Rs. 5 per 100 m2.

8. Find

(i) the lateral or curved surface area of a closed cylindrical petrol storage tank that is 4.2 m in diameter and 4.5 m high.

ii) how much steel was actually used, if 1/12 of the steel actually used was wasted in making the tank.