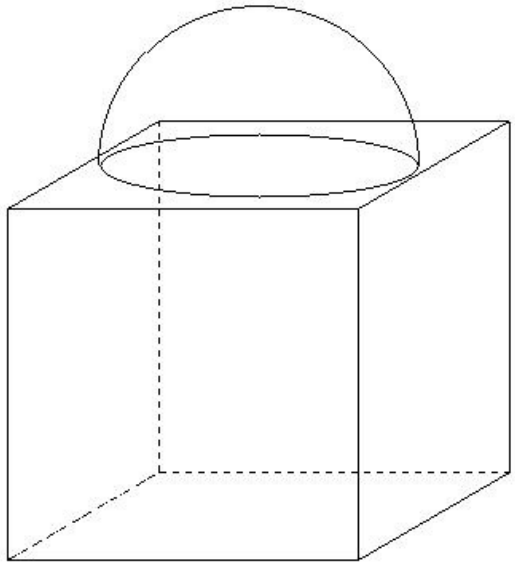
EduSahara™ Assignment

Name : Surface Area of a Combination of Solids

Chapter : Mensuration

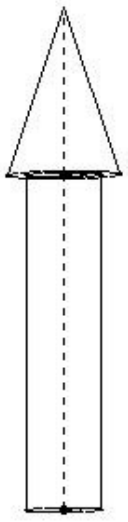
Grade : SSC Grade X

1. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 22.00 cm and the hemisphere fixed on the top has a diameter of 20.00 cm, find the total surface area of the block.



(i) 3218.29 sq.cm (ii) 3248.29 sq.cm (iii) 3168.29 sq.cm (iv) 3038.29 sq.cm (v) 3338.29 sq.cm

2. A wooden toy rocket is in the shape of a cone mounted on a cylinder. The height of the conical part is 9.00 cm , while the height of the cylindrical part is 18.00 cm. The base of the conical portion has a diameter of 6.00 cm while the base diameter of the cylindrical portion is 4.00 cm. If the conical portion is painted with black and cylindrical portion with orange, find the area of the rocket painted with each of these colors



(i) $\text{black area} = 107.19 \text{ sq.cm}, \text{orange area} = 240.86 \text{ sq.cm}$

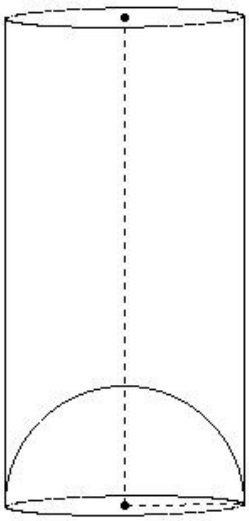
(ii) $\text{black area} = 104.19 \text{ sq.cm}, \text{orange area} = 237.86 \text{ sq.cm}$

(iii) $\text{black area} = 105.19 \text{ sq.cm}, \text{orange area} = 238.86 \text{ sq.cm}$

(iv) $\text{black area} = 106.19 \text{ sq.cm}, \text{orange area} = 239.86 \text{ sq.cm}$

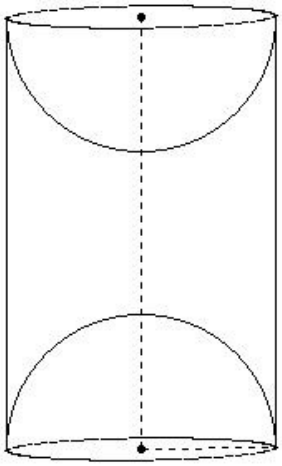
(v) $\text{black area} = 103.19 \text{ sq.cm}, \text{orange area} = 236.86 \text{ sq.cm}$

3. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 29.00 cm and its radius is 7.00 cm. Find the total surface area of the solid



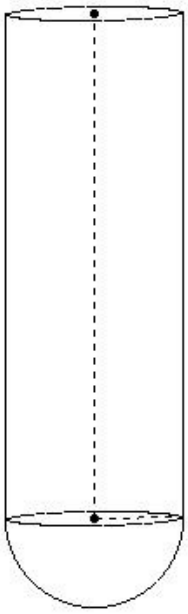
(i) 1478.00 sq.cm (ii) 1658.00 sq.cm (iii) 1978.00 sq.cm (iv) 1738.00 sq.cm (v) 1758.00 sq.cm

4. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 26.00 cm and its radius is 8.00 cm. Find the total surface area of the solid



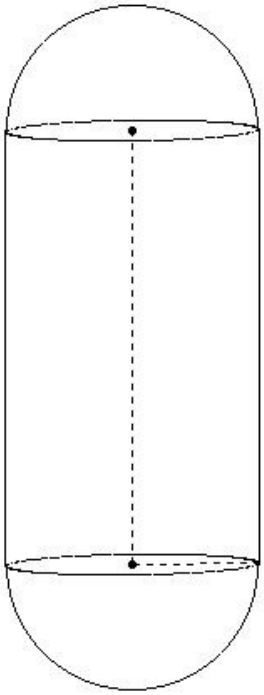
(i) 2292.00 sq.cm (ii) 2112.00 sq.cm (iii) 2342.00 sq.cm (iv) 1952.00 sq.cm (v) 1992.00 sq.cm

5. A solid consists of a cylinder with one hemispherical end with length 29.00 cm and diameter 10.00 cm. Find the total surface area of the solid



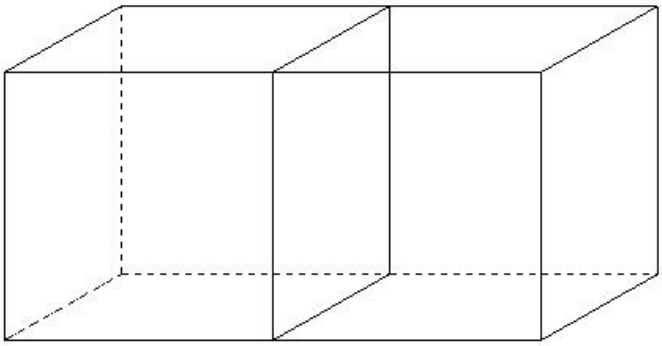
(i) 1007.14 sq.cm (ii) 1217.14 sq.cm (iii) 1287.14 sq.cm (iv) 1147.14 sq.cm (v) 927.14 sq.cm

6. A solid consists of a cylinder with two hemispherical ends with length 26.00 cm and diameter 15.00 cm. Find the total surface area of the solid



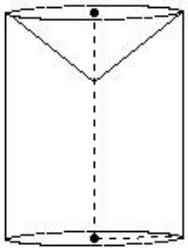
(i) 1702.86 sq.cm (ii) 2072.86 sq.cm (iii) 2182.86 sq.cm (iv) 1932.86 sq.cm (v) 1892.86 sq.cm

7. Two cubes each of volume 4913.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



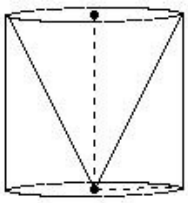
(i) 3060.00 sq.cm (ii) 2650.00 sq.cm (iii) 2810.00 sq.cm (iv) 3040.00 sq.cm (v) 2890.00 sq.cm

8. From a solid cylinder of height 13.00 cm and base radius 5.00 cm, a conical cavity of height 4.00 cm and base radius 5.00 cm is drilled out. Find the total surface area of the resulting solid



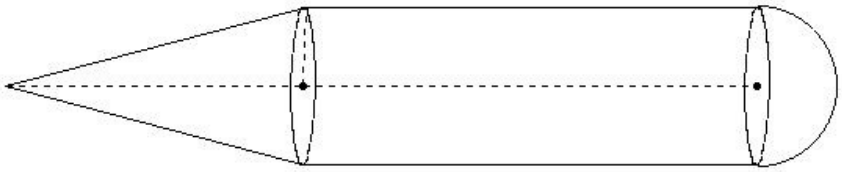
(i) 564.71 sq.cm (ii) 573.71 sq.cm (iii) 587.71 sq.cm (iv) 602.71 sq.cm (v) 615.71 sq.cm

9. From a circular cylinder of diameter 10.00 cm and height 10.00 cm, a conical cavity of the same base radius and of the same height is hollowed out. Find the total surface area of the remaining solid.



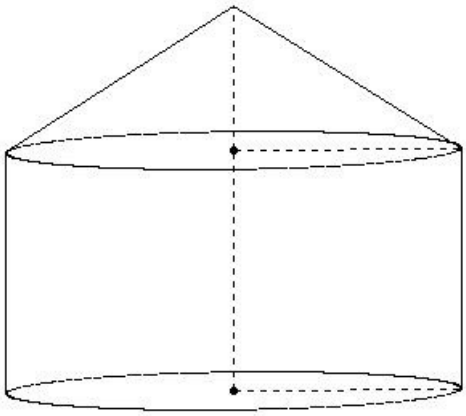
(i) 586.54 sq.cm (ii) 554.54 sq.cm (iii) 575.54 sq.cm (iv) 568.54 sq.cm (v) 550.54 sq.cm

10. A solid consists of a right circular cylinder with a hemisphere on one end and a cone on the other . The radius and height of the cylindrical part are 5.00 cm and 29.00 cm respectively. The radii of the hemispherical and conical parts are the same as that of the cylindrical part. Calculate the total surface area of the solid, if the height of the conical part is 19.00 cm



(i) 1377.36 sq.cm (ii) 1457.36 sq.cm (iii) 1227.36 sq.cm (iv) 1347.36 sq.cm (v) 1657.36 sq.cm

11. A tent is in the form of a cylinder surmounted by a cone., The height of the tent above the ground is 24 m and the height of the cylindrical part is 15.00 m. If the diameter of the base is 28.00 m, find the quantity of canvas required to make the tent. Allow 19% extra for folds and for stitching.



(i) 2582.07 sq.m (ii) 2312.07 sq.m (iii) 2442.07 sq.m (iv) 2692.07 sq.m

Assignment Key

1) (i)	2) (iii)	3) (iv)	4) (ii)	5) (iv)	6) (iv)
7) (v)	8) (iii)	9) (iv)	10) (i)	11) (iii)	