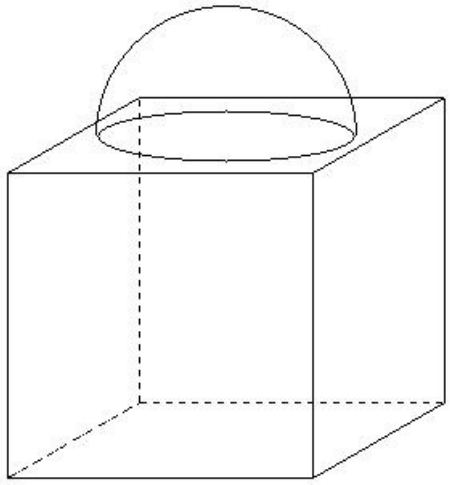
EduSahara™ Assignment

Name : Surface Area of a Combination of Solids

Chapter : Mensuration

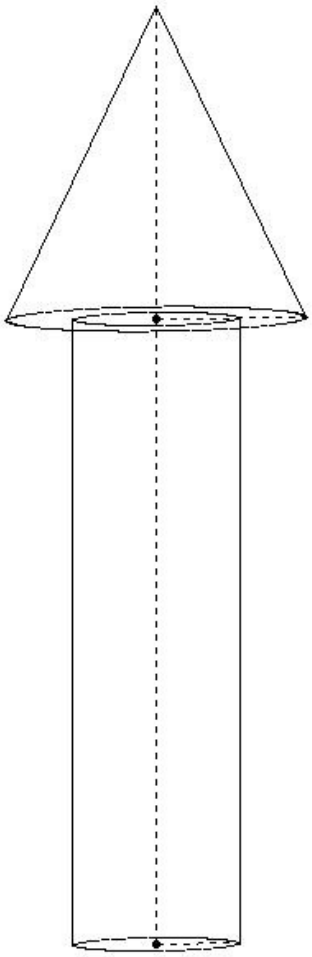
Grade : SSC Grade X

1. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 19.00 cm and the hemisphere fixed on the top has a diameter of 16.00 cm, find the total surface area of the block.



(i) 2517.14 sq.cm (ii) 2437.14 sq.cm (iii) 2207.14 sq.cm (iv) 2347.14 sq.cm (v) 2367.14 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 19.00 cm , while the height of the cylindrical part is 38.00 cm. The base of the conical portion has a diameter of 18.00 cm while the base diameter of the cylindrical portion is 10.00 cm. If the conical portion is painted with gray and cylindrical portion with orange, find the area of the rocket painted with each of these colors



(i) $\text{gray area} = 769.57 \text{ sq.cm}, \text{orange area} = 1271.86 \text{ sq.cm}$

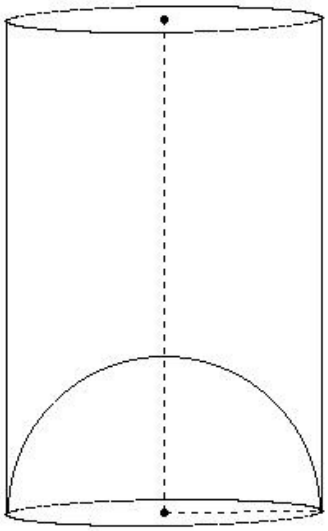
(ii) $\text{gray area} = 768.57 \text{ sq.cm}, \text{orange area} = 1270.86 \text{ sq.cm}$

(iii) $\text{gray area} = 771.57 \text{ sq.cm}, \text{orange area} = 1273.86 \text{ sq.cm}$

(iv) $\text{gray area} = 770.57 \text{ sq.cm}, \text{orange area} = 1272.86 \text{ sq.cm}$

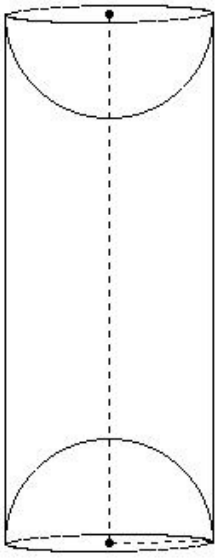
(v) $\text{gray area} = 772.57 \text{ sq.cm}, \text{orange area} = 1274.86 \text{ sq.cm}$

3. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 30.00 cm and its radius is 9.50 cm. Find the total surface area of the solid



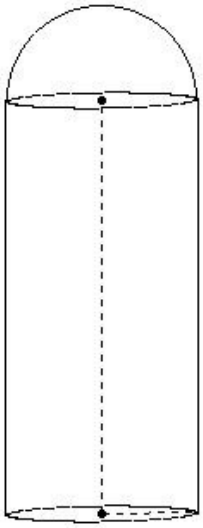
(i) 2762.36 sq.cm (ii) 2602.36 sq.cm (iii) 2412.36 sq.cm (iv) 2802.36 sq.cm (v) 2642.36 sq.cm

4. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 31.00 cm and its radius is 6.00 cm. Find the total surface area of the solid



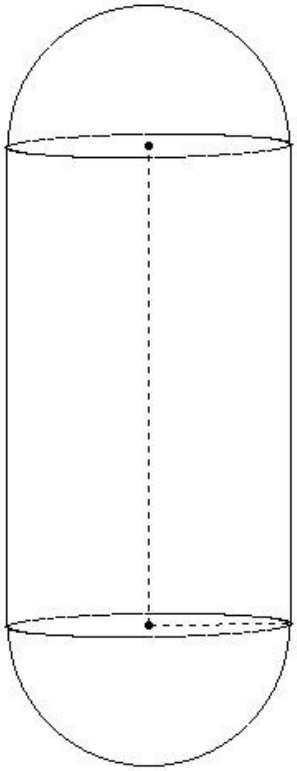
(i) 1551.71 sq.cm (ii) 1771.71 sq.cm (iii) 1621.71 sq.cm (iv) 1751.71 sq.cm (v) 1361.71 sq.cm

5. A solid consists of a cylinder with one hemispherical end with length 24.00 cm and diameter 11.00 cm. Find the total surface area of the solid



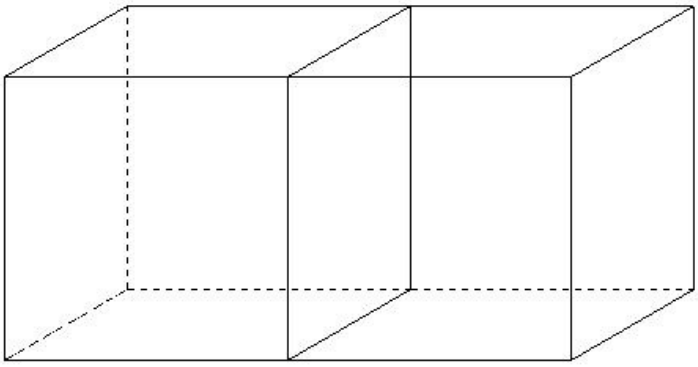
(i) 1184.93 sq.cm (ii) 1084.93 sq.cm (iii) 1114.93 sq.cm (iv) 1294.93 sq.cm (v) 964.93 sq.cm

6. A solid consists of a cylinder with two hemispherical ends with length 29.00 cm and diameter 17.00 cm. Find the total surface area of the solid



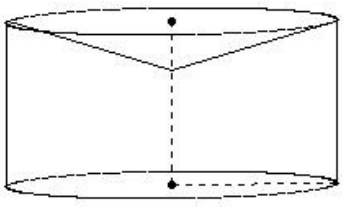
(i) 2707.71 sq.cm (ii) 2517.71 sq.cm (iii) 2457.71 sq.cm (iv) 2317.71 sq.cm (v) 2377.71 sq.cm

7. Two cubes each of volume 5832.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



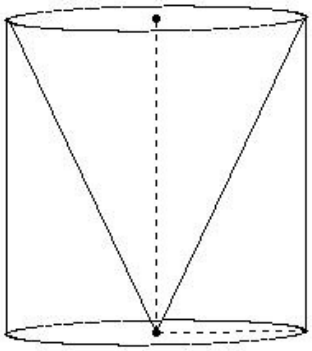
(i) 3260.00 sq.cm (ii) 3020.00 sq.cm (iii) 3400.00 sq.cm (iv) 3080.00 sq.cm (v) 3240.00 sq.cm

8. From a solid cylinder of height 10.00 cm and base radius 10.00 cm, a conical cavity of height 3.00 cm and base radius 10.00 cm is drilled out. Find the total surface area of the resulting solid



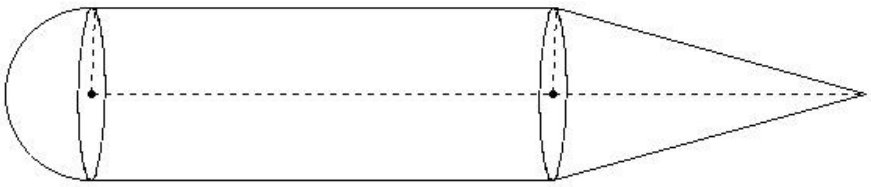
(i) 1550.97 sq.cm (ii) 1010.97 sq.cm (iii) 1340.97 sq.cm (iv) 1240.97 sq.cm (v) 1270.97 sq.cm

9. From a circular cylinder of diameter 18.00 cm and height 19.00 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.



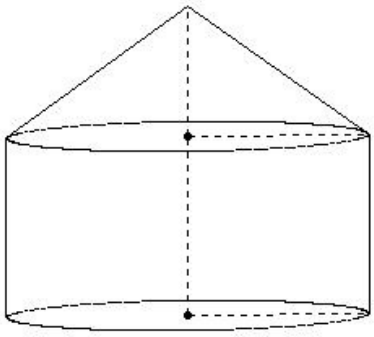
(i) 2063.99 sq.cm (ii) 1673.99 sq.cm (iii) 1793.99 sq.cm (iv) 2043.99 sq.cm (v) 1923.99 sq.cm

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 5.50 cm and 29.50 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 20.00 cm



(i) 1388.51 sq.cm (ii) 1618.51 sq.cm (iii) 1508.51 sq.cm (iv) 1698.51 sq.cm (v) 1568.51 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 19 m and the height of the cylindrical part is 11.00 m. If the diameter of the base is 22.00 m, find the quantity of canvas required to make the tent. Allow 12% extra for folds and for stitching.



(i) 1598.43 sq.m (ii) 1378.43 sq.m (iii) 1128.43 sq.m (iv) 1518.43 sq.m (v) 1248.43 sq.m

Assignment Key

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