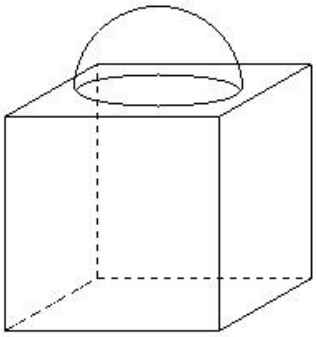
EduSahara™ Assignment

Name : Surface Area of a Combination of Solids

Chapter : Cone and Sphere

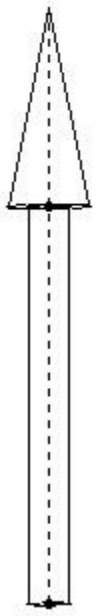
Grade : ICSE Grade X

1. If two solids, a cube and a hemisphere are combined such that the base of the block is a cube with edge 13.00 cm and the hemisphere fixed on the top has a diameter of 10.00 cm, find the total surface area of the block.



(i) 1092.57 sq.cm (ii) 1312.57 sq.cm (iii) 1262.57 sq.cm (iv) 942.57 sq.cm (v) 972.57 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 10.00 cm , while the height of the cylindrical part is 20.00 cm. The base of the conical portion has a diameter of 4.00 cm while the base diameter of the cylindrical portion is 2.00 cm. If the conical portion is painted with yellow and cylindrical portion with gray, find the area of the rocket painted with each of these colors



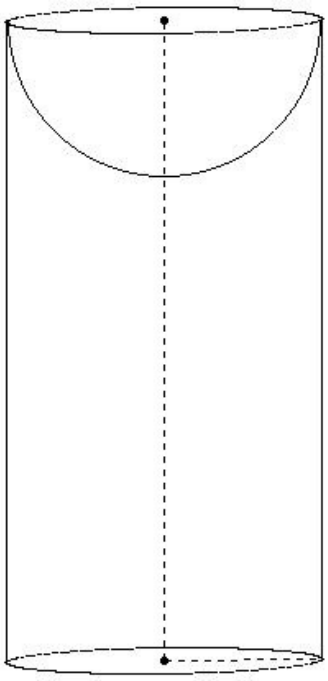
(i) $\text{yellow area} = 75.54 \text{ sq.cm}, \text{gray area} = 130.86 \text{ sq.cm}$ (ii) $\text{yellow area} = 73.54 \text{ sq.cm}, \text{gray area} = 128.86 \text{ sq.cm}$

(iii) $\text{yellow area} = 72.54 \text{ sq.cm}, \text{gray area} = 127.86 \text{ sq.cm}$

(iv) $\text{yellow area} = 71.54 \text{ sq.cm}, \text{gray area} = 126.86 \text{ sq.cm}$

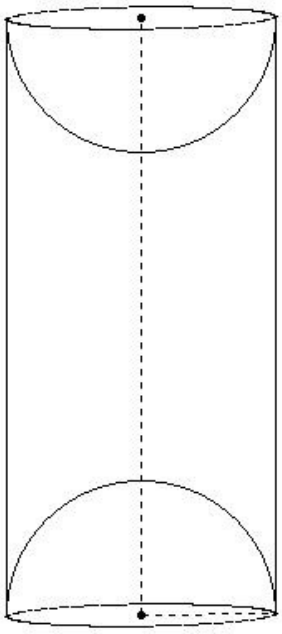
(v) $\text{yellow area} = 74.54 \text{ sq.cm}, \text{gray area} = 129.86 \text{ sq.cm}$

3. A hemispherical depression is cut out from one face of a cylinder. The height of the cylinder is 39.00 cm and its radius is 9.50 cm. Find the total surface area of the solid



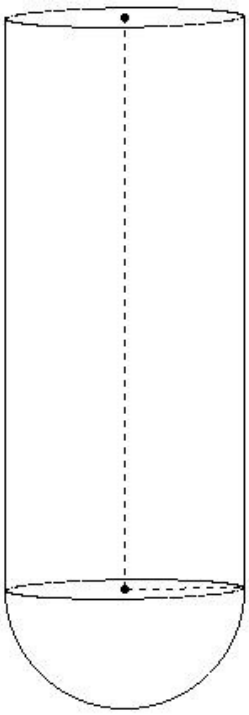
(i) 3129.79 sq.cm (ii) 3419.79 sq.cm (iii) 3249.79 sq.cm (iv) 2999.79 sq.cm (v) 3179.79 sq.cm

4. A hemispherical depression is cut out from both ends of a cylinder. The height of the cylinder is 36.00 cm and its radius is 8.00 cm. Find the total surface area of the solid



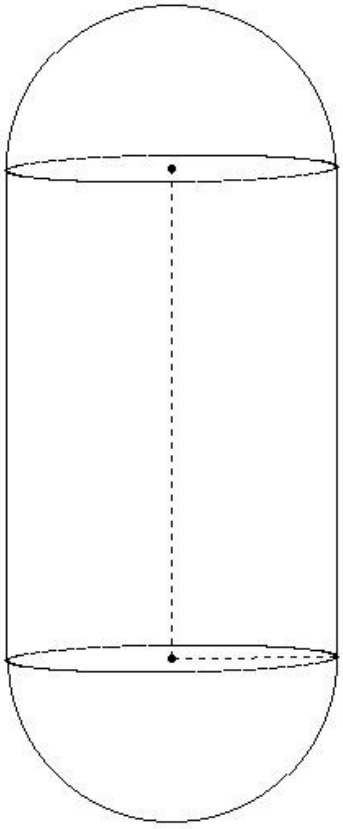
(i) 2334.86 sq.cm (ii) 2764.86 sq.cm (iii) 2754.86 sq.cm (iv) 2614.86 sq.cm (v) 2534.86 sq.cm

5. A solid consists of a cylinder with one hemispherical end with length 34.00 cm and diameter 14.00 cm. Find the total surface area of the solid



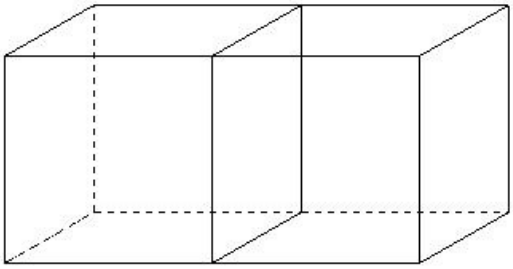
(i) 1838.00 sq.cm (ii) 1958.00 sq.cm (iii) 2008.00 sq.cm (iv) 1688.00 sq.cm (v) 2098.00 sq.cm

6. A solid consists of a cylinder with two hemispherical ends with length 30.00 cm and diameter 20.00 cm. Find the total surface area of the solid



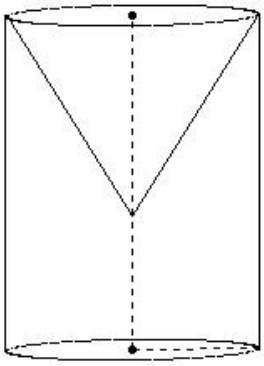
(i) 3222.86 sq.cm (ii) 3382.86 sq.cm (iii) 3122.86 sq.cm (iv) 3142.86 sq.cm (v) 2972.86 sq.cm

7. Two cubes each of volume 2197.00 cu.cm are joined end to end . Find the surface area of the resulting cuboid.



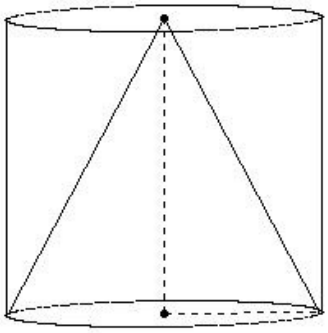
(i) 1840.00 sq.cm (ii) 1530.00 sq.cm (iii) 1690.00 sq.cm (iv) 1650.00 sq.cm (v) 1960.00 sq.cm

8. From a solid cylinder of height 20.00 cm and base radius 7.50 cm, a conical cavity of height 12.00 cm and base radius 7.50 cm is drilled out. Find the total surface area of the resulting solid



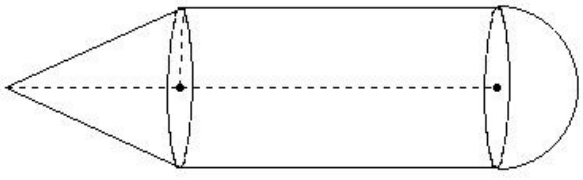
(i) 1453.18 sq.cm (ii) 1423.18 sq.cm (iii) 1713.18 sq.cm (iv) 1213.18 sq.cm (v) 1603.18 sq.cm

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



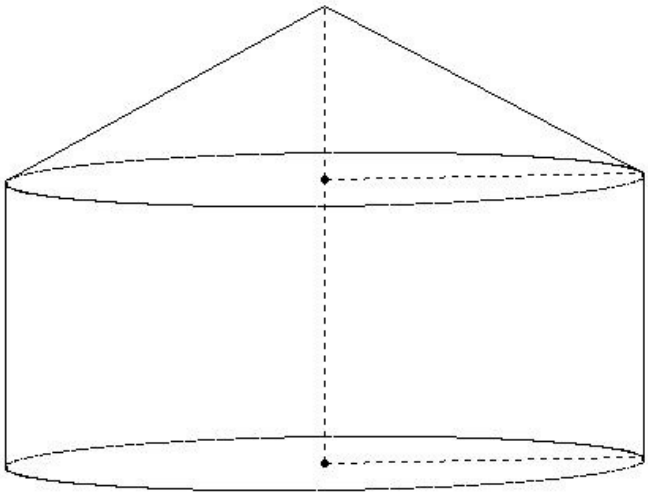
(i) 1966.09 sq.cm (ii) 2096.09 sq.cm (iii) 1786.09 sq.cm (iv) 2106.09 sq.cm (v) 1706.09 sq.cm

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 20.00 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 11.00 cm



(i) 988.54 sq.cm (ii) 973.54 sq.cm (iii) 975.54 sq.cm (iv) 953.54 sq.cm (v) 999.54 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 29 m and the height of the cylindrical part is 18.00 m. If the diameter of the base is 40.00 m, find the quantity of canvas required to make the tent. Allow 15% extra for folds and for stitching.



(i) 4522.57 sq.m (ii) 4252.57 sq.m (iii) 4402.57 sq.m (iv) 4182.57 sq.m (v) 4092.57 sq.m

Assignment Key

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