ASSIGNMENT
CLASS – IX
CHAPTER – 13 (SURFACE AREAS AND VOLUMES)

Section - A

Q.1 If surface areas of two spheres are in the ratio of 4: 9 then the ratio of their volumes is

(a) $\frac{16}{27}$ (b) $\frac{4}{27}$ (c) $\frac{8}{27}$ (d) $\frac{9}{27}$

Q.2 The surface area of a cube whose edge is 11cm is

(a) $725cm^2$ (b) $726cm^2$ (c) $727cm^2$ (d) $728cm^2$

Q.3 A match box measures 4cm X 2.5cm X 1.5cm. What will be the volume of a packet containing 12 such boxes?

(a) $15cm^3$ (b) $180cm^3$ (c) $90cm^3$ (d) $175cm^3$

Q.4 The curved surface area of a right circular cylinder of height 14cm is $88cm^2$. Find the diameter of the base of the cylinder.

(a) 1cm (b) 2cm (c) 3cm (d) 4cm

Q.5 The total surface area of a cone of radius $\frac{r}{2}$ and length $2l$ is

(a) $2\pi r(l + r)$ (b) $\pi r(l + r)$

(c) $\pi r\left(l + \frac{r}{4}\right)$ (d) $\pi r\left(l + \frac{r}{2}\right)$

Q.6 The surface area of sphere of radius 10.5cm is

(a) $1386cm^2$ (b) $616cm^2$

(c) $1390cm^2$ (d) $10cm^2$

Section - B

Q.7 Find the volume of a sphere whose surface area is $154cm^2$.

Q.8 A solid cylinder has a total surface area of $231cm^2$. Its curved surface area is $\frac{2}{3}$ of the total surface area. Find the volume of the cylinder.

Q.9 The diameter of a garden roller is 1.4m and it is 2m long. How much area will it cover in 5 revolutions? $(\pi = 22/7)$

Q.10 Three metal cubes whose edge measure 3cm, 4cm and 5cm respectively are melted to form a single cube, find its edge.

Q.11 The dimensions of a cubiod are in the ratio of 1 : 2 : 3 and its total surface area is 88m^2. Find the dimensions.

Section - C

Q.12 A cuboidal oil tin is 30cm X 40cm X 50cm. Find the cost of the tin required for making 20 such tins if the cost of tin sheet is Rs. 20/m^2.

Q.13 Find the lateral curved surface area of a cylindrical petrol storage tank that is 4.2m in diameter and 4.5m high. How much steel was actually used, if $\frac{1}{12}$ of steel actually used was wasted in making the closed tank.

Q.14 The radius and height of a cone are in the ratio 4 : 3. The area of the base is 154cm^2. Find the area of the curved surface.

Q.15 A sphere, cylinder and cone are of the same radius and same height. Find the ratio of their curved surfaces.

Q.16 A hemispherical bowl of internal diameter 36cm contains a liquid. This liquid is to be filled in cylindrical bottles of radius 3cm and height 6cm. How many bottles are required to empty the bowl?

Q.17 A hemisphere of lead of radius 8cm is cast into a right circular cone of base radius 6cm. Determine the height of the cone.

Q. 18 A wooden toy is in the form of a cone surmounted on a hemisphere. The diameter of the base of the cone is 6cm and its height is 4cm. find the cost of painting the toy at the rate of Rs, 5 per 1000 cm^2.

Answer

Q.1 c Q.2 b Q.3 b Q.4 b

Q.5 c Q.6 a

Q.7 179.66cm^2

Q.8 269.5cm^2 Q.9 44m^2

Q.10 6cm Q.11 2, 4, 6 cm

Q.12 Rs. 376 Q.13 59.4m^2, 95.04m^2

Q.14 192.5cm^2

Q.15 4 : 4 : $\sqrt{5}$ Q.16 72

Q.17 28.44 Q.18 Rs. 0.51