MATHEMATICS
CLASS – IX
REVISION QUESTIONS
VOLUME & SURFACE AREA

ZERO PERIOD
We Believe in Learning

SECTION [A]

1. Find the length of longest rod that can be kept in a hall of $23m \times 10m \times 10m$
2. Find the radius of a sphere whose surface area is 154 cm^2.
3. Find the height of a right circular cone whose slant height is 25 cm and base diameter is 14 cm.
4. The total surface area of a cube is 216 cm^2. Find its volume
5. The lateral surface area of a cube is 100m^2. Find the volume of the cube
6.

SECTION [B]

7. The area of the base of a right circular cylinder is 154 cm^2 and its height is 15 cm. find the volume of the cylinder.
8. A joker's cap is in the form of a right circular cone of base radius 7 cm and height 24 cm. find the area of the sheet required to make 10 such caps.
9. If the volume and the base area of a right circular cone are $48\pi cm^3$ and $12\pi cm^2$ respectively, then find the height of the cone.
10. How many litres of milk can a hemispherical bowl of diameter 10.5 cm hold?
11. A matchbox measures $4cm \times 2.5cm \times 1.5cm$. what will be the volume of a packet containing 12 such boxes?

SECTION [C]

12. The radius of a sphere is 5 cm. if the diameter is increased by 20%, what will be its new radius?
13. Two cylinders have same lateral surface area. There radii are in the ratio 3:2. Find the ratio of heights of the cylinders.
14. Ina cuboid, the area of its base is 88 cm^2 and its volume is 440 cm^3. Find its height
15. The length of a cold storage is double its breadth. Its height is 3m. The area of its four walls(including door) is 108 m^2. Find its volume.
16. The height and the slant height of a cone are 21cm and 28cm respectively. Find the volume of the cone.
17.

SECTION [D]

18. A lead pencil consists of a cylinder of wood with a solid cylinder of graphite filled in the interior. The diameter of the pencil is 14cm; find the volume of wood and that of graphite.
19. Two cubes each of 10cm edge are joined end to end. Find the surface area of the resultant cuboid.
20. The radius of a spherical balloon increases from 6cm to 12 cm as air is being pumped into it. Find the ratio of the surface areas of the balloon in these two cases.
21. A reservoir is in the form of a rectangular parallelepiped (cuboid). Its length is 20 m. if 18 kl of water is removed from the reservoir, the water level goes down by 15cm. find the width of the reservoir.(1kl=1m^3).
22. The diameter of a copper sphere is 6cm. the sphere is melted and drawn into a long wire of circular cross section. If the length of the wire is 36cm, find its radius.
23. A well of inner diameter 14m is dug to a depth of 15m. earth taken out of it has been evenly spread all around it to a width of 7m to form an embankment. Find the height of the embankment so formed.
24. A room is 16m long, 9m wide and 3m high. It has two doors, each of dimensions $2m \times 1.5m$ and three windows each of dimensions $1.6m \times 75cm$. Find the cost of distempering the walls of the room from inside at the rate of ₹5 per square meter
25. A tent is in the form of a right circular cylinder, surmounted by a cone. The diameter of the cylinder is 24m. the height of the cylindrical portion is 11m, while the vertex of the cone is 16m above the ground. Find the area of canvas required for the tent.
26. The diameter of a roller is 80cm and its length is 126cm. it takes 750 revolutions to level a playground. Find the area of the playground in m^2.
27. A solid metallic sphere of diameter 21cm is melted and re-casted into a number of smaller cones, each of diameter 7cm and height 3cm. find the number of cones so formed.