**Half mark and one-mark questions**

1. If a cylinder and a cone are of the same radius and height, then how many cones full of milk can fill the cylinder? Answer with reasons?
2. If the radius of hemisphere is 21cm, then find its volume?
3. “A conical solid block is exactly fitted inside the cubical box of side ‘a’ then the volume of the conical solid block is a3”. Is this statement true? Justify your answer?
4. If the surface area of a hemisphere is ‘S’ the express ‘r’ in terms of ‘S’?
5. Find the curved surface area of a cylinder of radius 14cm and height 21cm?
6. Write the formula to find curved surface area of a cone and explain each term in it?
7. If a cone is inscribed in a cylinder, what is the ratio of their volumes?
8. “Cuboid is one of right prism”. Is it true? Justify.
9. In a hemispherical bowl of 2.1cm radius ice-cream is there. Find the volume of the bowl?
10. If the metallic cylinder of height 4cm and radius 3cm is melted under recast into a sphere, then find the radius of the sphere?
11. Find the area of a sector whose radius is 7cm and the angle is 1200?
12. Find the curved surface area of right circular cone with radius 6cm and height 7cm?
13. Find the volume of right circular cone with radius 6cm and height 7cm?
14. Find the volume of sphere of radius 2.1cm?
15. The total surface area of a cube is 64cm². Find its volume?
16. If one litre of water to fill in a cube shape tin, what is the measurements required of cube (in cm s)? Explain?
17. Express the volume of a sphere in terms of diameter ’d’?
18. Find the length of the longest pole can be placed inside of a cuboid whose dimensions are l, b, and h?
19. If the ratio of volumes of two spheres is 64: 27, find ratio of their radii?
20. Write the solid shapes involved in shuttle cock?
21. What is the vertical cross of right circular cone?
22. The ratio of heights of two cylinders is 7:3. Then find ratio of their curved surface areas?
23. Write the relation among the slant height, vertical height and radius of a cone?
24. If the lateral surface area of cuboid is ‘L’ and perimeter of the base is ‘p’ then find its height?
25. Two right circular cylinders of equal volumes have their heights in the ratio 1:2. What is the ratio of their radii?
26. If a cone and a sphere have equal radii and equal volumes. What is the ratio of the diameter of the sphere to the height of the cone?
27. Find the volume of a cube whose total surface area is 216cm²?

**Two marks questions**

1. The radius of a spherical balloon increases from 7cm to 14cm as air pumped into it. Find the ratio of the volume of the balloon before and after pumping the air?
2. Find the volume and surface area of a sphere of radius 42cm?
3. A solid metallic ball of volume 64cm3 melted and made into a solid cube. Find the side of the solid cube?
4. A toy is in the form of a cone mounted on a hemisphere. The radius of the base and the height of the cone are 7cm and 8cm respectively. Find the surface area of the toy?
5. The diameter of a solid sphere is 6cm. It is melted and recast into a solid cylinder of height 4cm. Find the radius of the cylinder?
6. The height and the base radius of a cone and a cylinder are equal to the radius of a sphere. Find the ratio of their volumes?
7. The diameter of height the base of a right circular cone is 12cm and volume 376.8cm3. Find its height? (use π = 3.14)
8. A right circular cylinder has radius 3.5cm and height 14cm. Find curved surface area?
9. The curved surface area of a cone is 4070cm². Its diameter is 70cm. What will be its slant height?
10. A joker’s cap is in the form of right circular cone, whose base radius is 7cm and height is 24cm. Find the area of sheet required to make 10 such caps?
11. A sphere, a cylinder and a cone are of the same radius and same height. Find the ratio of their curved surface areas?
12. Three cubes of side 5cm are joined end to end. Find the surface area of the resulting cuboid?
13. How many spherical lead shots of diameter 4cm can be made out of a solid cube of lead whose edge measure 44cm?

**Four marks questions**

1. A heap of rice is in the form of a cone of diameter 12m and height 8m. Find its volume. How much canvas cloth is required to cover to heap? (Use π = 3.14).
2. An oil drum is in the shape of cylinder whose diameter is 2m and height is 7m. The painter charges Rs. 5/- per m² to paint the drum. Find the total charges to be paid the painter for 10 drums?
3. A medicine capsule is in the shape of a cylinder with two hemispheres stuck to each of its ends. If the length of the cylindrical part of the capsule is 14mm and the diameter of hemisphere is 6mm, then find the volume of medicine capture?
4. The area of a sector shaped canvas cloth is 264m². With this canvas cloth, if a right circular conical tent is erected with the radiis of the base as 7m, then find the height of the tent?
5. DWACRA is supplied cuboidal shaped wax block with measurements 88cm × 42cm × 35cm. From this how many number of cylindrical candles of 2.8cm diameter and 8cm of height can be prepared?
6. How many spherical balls each 7cm in diameter can be made out of a solid lead cube whose edge measures 66cm?
7. The length of a cuboid is 12cm, breadth and height are equal in measurements and its volume is 432cm3. The cuboid is cut into two cubes. Find the lateral surface area of each cube?
8. How many silver coins of diameter 5cm and thickness 4mm have to be melted to prepare a cuboid of 12cm × 11cm × 5cm dimensions?
9. A metallic sphere of diameter 30cm is melted and recast into a cylinder of radius 10cm. Find the height of the cylinder?
10. A toy is made with seven equal cubes of sides cm. Six cubes are joined to six faces of a seventh cube. Find the total surface area of the toy?
11. A cylindrical tank of radius 7cm has water to some level. If 110 cubes of the side off the side 7cm are completely measured in it, then find the raise in water level?
12. A well of diameter 14m is dug 15m deep. The earth taken out of it has been spread evenly all around it in the shape of a circular ring of with 7m to form an embankment. Find the height of the embankment?