

Mensuration

Chapter 7: Mensuration · Topic 1

Key Concept

The surface area and volume of solids like cylinders, cones, and spheres are calculated using specific formulas based on their dimensions.

Combined solids, made of multiple basic shapes, require calculating each shape's contribution and combining them appropriately.

The frustum of a cone (a cone with the top cut off) has its own formulas for surface area and volume based on its two radii and height.

Mensuration has practical applications in construction, packaging design, and calculating materials needed for various projects.

Quick Revision Notes

- Solids: cylinders, cones, spheres.
- Each has specific area, volume formulas.
- Combined solids: multiple basic shapes.
- Calculate each part's contribution, combine.
- Frustum: cone with top cut off.
- Has own formulas based on two radii, height.
- Mensuration applies to construction, packaging.
- Also calculating project material needs.

Practice Questions

- 1 Calculate the volume of a cylinder with given dimensions.
- 2 Calculate the volume of a combined solid (cylinder + cone).
- 3 Calculate the surface area of a frustum given its measurements.
- 4 Discuss a practical use of mensuration in construction.
- 5 Solve a packaging design problem using mensuration.
- 6 Explain mensuration in your own words.