📚 MATH LOVE INSTITUTE

Education as a Service (EaaS)

Sample Question Paper - SET 1

📱 +91-7869553517 | 🌐 www.mathlove.in

Class	X	Subject	Mathematics (041)
Chapter	12 - Surface Areas and Volumes	Time Allowed	40 Minutes
Maximum Marks	10	Date	_____

GENERAL INSTRUCTIONS:

1. This question paper contains **5 questions** from Chapter 12 - Surface Areas and Volumes.
2. All questions are compulsory.
3. Section A (Q1): 1 mark
4. Section B (Q2): 2 marks
5. Section C (Q3-Q4): 3 marks each
6. Section D (Q5): 1 mark (Assertion-Reason)
7. Use of calculator is not permitted.
8. Draw neat and labeled diagrams wherever required.
9. Use $\pi = 22/7$ unless stated otherwise.

HOW TO SUBMIT:

1. Solve this question paper in your notebook or on loose sheets.
2. Clearly write your **Name, Roll Number, School Name, and Date** on the first page.

3. Upload your solved paper at: **www.mathlove.in**
4. Check your **detailed report card** after evaluation.
5. For queries, WhatsApp: **+91-7869553517**

SECTION A - 1 MARK QUESTION

Q1. A solid is in the form of a cylinder with hemispherical ends. If the total length of the solid is 20 cm and the diameter of the hemispherical ends is 7 cm, find the cost of polishing its surface at the rate of ₹5 per 100 cm². (Take $\pi = 22/7$) **[1]**

SECTION B - 2 MARKS QUESTION

Q2. A metallic sphere of radius 4.2 cm is melted and recast into the shape of a cylinder of radius 6 cm. Find the height of the cylinder. **[2]**

SECTION C - 3 MARKS QUESTIONS

Q3. A toy is in the shape of a cone mounted on a hemisphere of same base radius. If the volume of the toy is 231 cm³ and its diameter is 7 cm, find the height of the toy. (Take $\pi = 22/7$) **[3]**

Q4. From a solid cylinder of height 14 cm and base diameter 7 cm, two equal conical holes each of radius 2.1 cm and height 4 cm are cut off. Find the volume of the remaining solid. (Take $\pi = 22/7$) **[3]**

SECTION D - 1 MARK (ASSERTION-REASON)

Q5.

Assertion (A): A solid is in the form of a right circular cone mounted on a hemisphere. The radius of the hemisphere is 3.5 cm. If the total height of the solid is 9.5 cm, then the volume of the solid is 166.83 cm^3.

Reason (R): Volume of combined solid = Volume of cone + Volume of hemisphere

Choose the correct option:

(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

[1]

H-1 Street 2, V V Vihar, Shankar Nagar, Raipur (C.G.)
+91-7869553517 | www.mathlove.in | info@mathlove.in