

Mensuration 3D

Part - II

A right circular cone has a diameter of 14 cm and a height of 24 cm. What is the slant height ? SSC CGL 12/09/2025 (Shift 3)

(a) 25 cm

(b) 30 cm

(c) 35 cm

(d) 40 cm



A vertical cylindrical container is filled with oil. A solid hemispherical stone of radius 6 cm is immersed completely, and the oil level rises by 2.5 cm . What is the radius of the cylinder ? SSC CGL 12/09/2025 (Shift 3)

- (a) 6.29 cm. (b) 7.59 cm (c) 8.79 cm (d) 11.41 cm



A cylinder and a cone have the same base radius and volume. Find the ratio of the height of the cylinder to the height of the cone. SSC CGL 13/09/2025 (Shift 3)

(a) 1 : 3

(b) 3 : 1

(c) 2 : 1

(d) 1 : 2



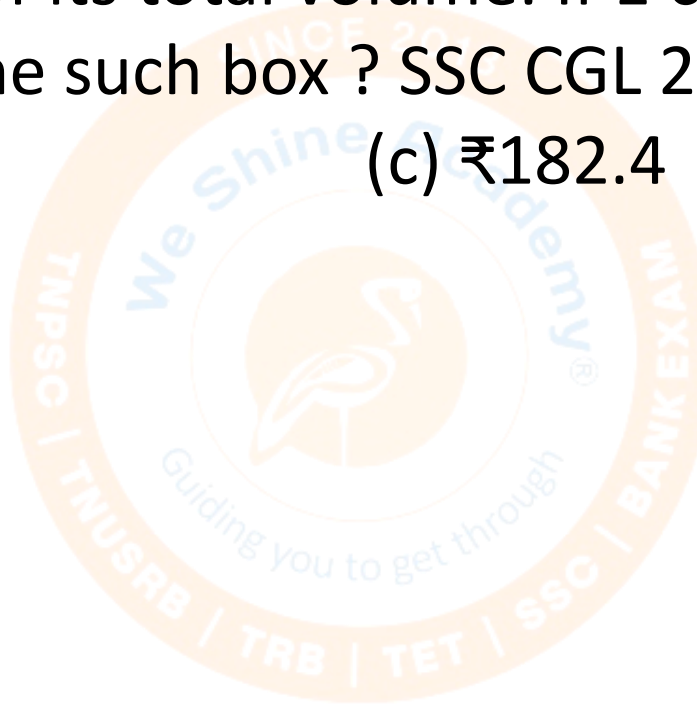
A company makes a gift box in the shape of a right pyramid with a square base. The base side of the box is 8 cm, and its height is 15 cm. Due to safety limits, the box can be filled only up to 80% of its total volume. If 1 cm^3 of material costs ₹0.60, what will be the cost to fill one such box ? SSC CGL 21/09/2025 (Shift 1)

(a) ₹153.6

(b) ₹163.6

(c) ₹182.4

(d) ₹192.3



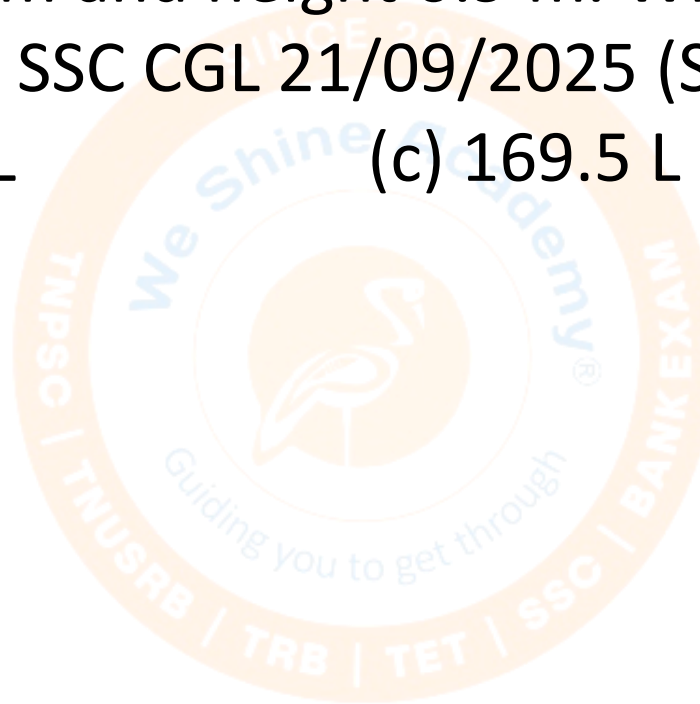
A water tank is shaped like a composite prism: the bottom part is a triangular prism with base area 80 cm^2 and height 1.5 m , while the top part is a rectangular prism with base $50 \text{ cm} \times 35 \text{ cm}$ and height 0.9 m . What is the total volume of the tank in liters? ($1 \text{ m}^3 = 1000 \text{ L}$) SSC CGL 21/09/2025 (Shift 2)

(a) 160.8 L

(b) 178.5 L

(c) 169.5 L

(d) 201.5 L



A pyramid with an equilateral triangular base of side 15 cm and height 20 cm is placed on top of a cube with side length 15 cm. Find the total volume of the composite solid. SSC CGL 21/09/2025 (Shift 3)

- (a) 2102.3 cm^3 (b) 1202.5 cm^3 (c) 4024.5 cm^3 (d) 6202.3 cm^3



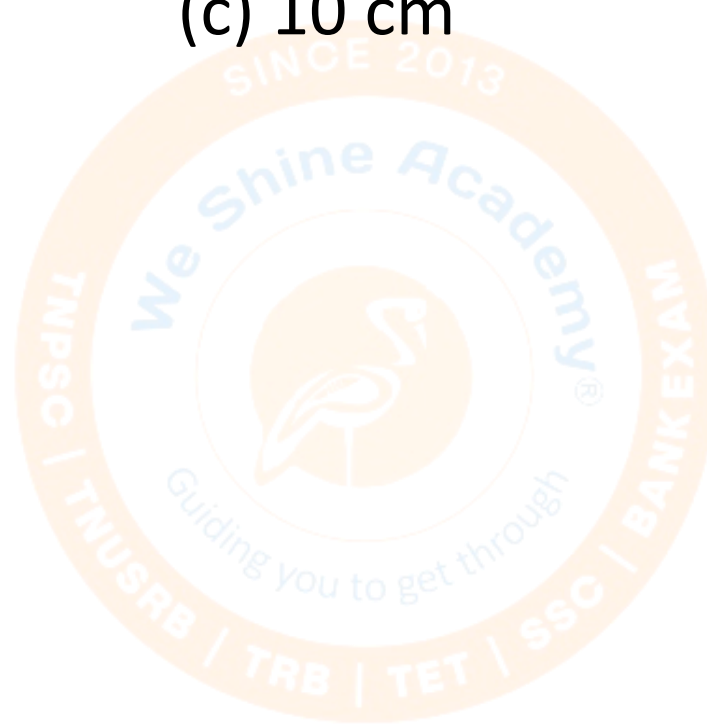
In a right prism with a square base, volume = 1296 cm^3 and height = 9 cm. What is the side of the square base? SSC CGL 21/09/2025 (Shift 3)

(a) 5 cm

(b) 8 cm

(c) 10 cm

(d) 12 cm



A spherical balloon is inflated, causing its radius to grow by 5%. By what percentage does its surface area increase? SSC CGL 22/09/2025 (Shift 1)

(a) 10.25%

(b) 20%

(c) 21.25%

(d) 25%



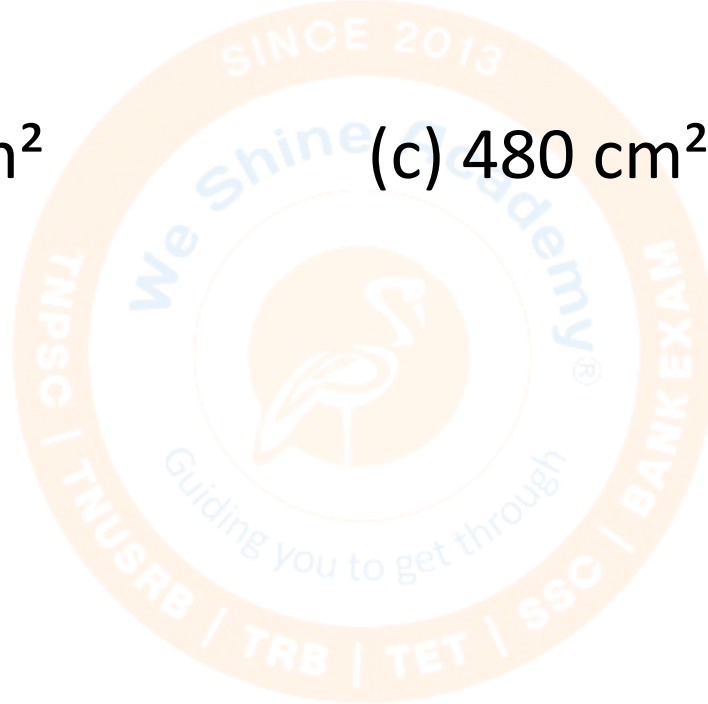
A triangular storage prism has a base in the shape of a right triangle and its side lengths are in the ratio 3 : 4 : 5. If the total perimeter of the base is 54 cm and the height of the prism is 8 cm, find the lateral surface area of the prism. SSC CGL 24/09/2025 (Shift 2)

(a) 360 cm^2

(b) 300 cm^2

(c) 480 cm^2

(d) 432 cm^2



A prism has a base perimeter of 20 cm and height 8 cm. If its total surface area is 200 cm^2 , what is the area of both bases combined ? SSC CGL 25/09/2025 (Shift 1)

(a) 52 cm^2

(b) 46 cm^2

(c) 40 cm^2

(d) 62 cm^2





Thank You