

WANDOOR GANITHAM - S S L C UNIT TEST 2021

8.08BE

SOLIDS

Total Score : 20

Time : 40 minutes

- The base area and height of a cone are 81π square centimetres and 12 centimetres .
 - What is its slant height ?
 - What is its curved surface area ? (2)
- The base perimeter and slant height of a cone are 16π centimetres and 17 centimetres .
 - What is its height ?
 - What is its volume ? (2)
- The slant height of a cone makes an angle 60° with its radius . The radius is 10 centimetres .
 - What is its slant height ?
 - What is its height ? (2)
- The base radius and height of a solid metal cone are 5 centimetres and 12 centimetres
 - What is its slant height ?
 - What is its surface area ?
 - If 10000 such cone are painted and cost of the painting is 10 rupees per square metre , what will be the total cost ? (hint : $\pi = 3.14$) (3)
- The base radii of two cones are in the ratio 2 : 3 and their slant heights are in the ratio 4 : 5
 - If the slant height of the first cone is taken as $4l$, what will be the slant height of the second cone ?
 - What is the ratio of their curved surface areas ?
 - If the curved surface area of the first cone is 320π square centimetres , what will be the curved surface area of the second cone ? (3)

6. A sector of area 36π square centimetres is rolled up into a cone of base radius 3 centimetres .

a) What is curved surface area of the cone ?

b) What is the slant height of the cone ?

c) What is the radius of the sector ?

d) What is the central angle of the sector ? (4)

7. A cone of maximum volume is carved out from a solid metal cylinder of base radius 12 centimetres and height 15 centimetres .

a) What is the volume of the cylinder ?

b) What is the volume of the cone ?

c) What is the volume of the remaining portion of the cylinder ?

d) The remaining portion of the cylinder is melted and recast in to small cones of base radius 4 centimetres and height 6 centimetres . What is the number of small cones obtained ? (4)