## <u>INTERNATIONAL INDIAN SCHOOL</u> <u>BURAIDAH</u>

## Worksheet For The Academic Year 2023-24CLASS: IX SUBJECT: Mathematics DATE: 12/11/2023LESSON-13 Surface Areas & Volumes

- 1) Find the CSA of a cone of radius 5cm and height 12cm.
- 2) The radius of a cone is 7cm and area of curved surface is 176cm<sup>2</sup>. Find its slant height.
- 3) Find the TSA of a cone of radius 6cm and height 8cm.
- 4) If the height and slant height of a cone are 21cm and 28cm respectively, find Its volume.
- 5) Find the area of canvas required for a conical tent of height 24m and base radius 7m.
- 6) The height of a conical vessel is 3.5cm. If the capacity of the vessel is 3.3 litres of milk , find the diameter of its base.
- 7) Find the surface area of a sphere of radius 7cm.
- 8) Find the CSA and TSA of a hemisphere of radius 21cm.
- 9) The sides of a right triangle are 7cm , 24cm and 25cm. If it is revolved about its side 7cm to form a cone , find its volume.
- 10) Find the volume of a sphere of radius 11.2cm.
- 11) A hemispherical bowl has a radius of 3.5cm. What would be the volume of water it would contain?
- 12) Find the volume of the largest cone that can be fitted in a cube of side 14cm.
- 13) A capsule of medicine is in the shape of a sphere of diameter 3.5mm. How much medicine can be filled in the capsule?
- 14) The total surface area of a hemisphere is 5940cm<sup>2</sup>. Find the diameter of the hemisphere.
- 15) How many litres of milk can a hemispherical bowl of diameter 10.5cm hold?
- 16) A hemispherical bowl is 0.2cm thick and its inner diameter is 8cm. Find its outer CSA. Also find the cost of polishing its outer surface at Rs 2 per cm<sup>2</sup>.
- 17) The water for a industry is stored in a hemispherical tank of internal diameter 14m. If the tank has 40m<sup>3</sup>(40kL) of water in it, how much of water is to be filled in the tank?

- 18) The circumference of the base of a cone 24m high is 44m. Find its CSA.
- 19) How many metres of cloth  $1\frac{4}{7}$  m wide will be required to make a conical tent whose base diameter is 10m and height is 12m?
- 20) Find the volume of a sphere whose surface area is 154 cm<sup>2</sup>.

## ANSWERS

1) 204.28cm <sup>2</sup>	8) 2772cm <sup>2</sup> , 4151cm <sup>2</sup>	15) 0.303litres
2) 8cm	9) 1232cm <sup>3</sup>	16) 110.88cm <sup>2</sup> , Rs 221.76
3) 301.71cm <sup>2</sup>	10) 5887.32cm <sup>3</sup>	17) 678.67m <sup>3</sup> or KL
4) 7539.14cm <sup>3</sup>	11) 8.9cm <sup>3</sup>	18) 550m <sup>2</sup>
5) 550m <sup>2</sup>	12) 718.67cm <sup>3</sup>	19) 130m
6) 60cm	13) 22.458 mm <sup>3</sup>	20) 179.66cm <sup>3</sup>
7) 616cm <sup>2</sup>	14) $6\sqrt{70}$ cm	