VOLUME SURFACE AREA – TEST 23

1. A sphere of radius 6 cm is melted and then a solid cylinder of base radius 2 cm is made from it. The height of the solid cylinder, thus formed is:

a) 72 cm b) 36 cm
c) 12 cm d) 24 cm

2. The height of a cone is 9 cm and diameter of its base is 14 cm. What is its volume?

a) 262 b) 362
c) 462 d) 562

3. The surface area of a cube is 600 sq. cm. Its diagonal is:

a) 10 √ 3 cm b) . 5 √ 3 cm
c) 4 √ 3 cm d) 10 √ 2 cm

4. A solid spherical copper ball whose diameter is 14 cm is melted and converted into a wire having diameter equal to 14 cm. The length of the wire is:

a) 27 cm b) 16/3
c) 15 cm d) 28/3

5. Find the area of the lateral surface of a right circular cylinder, the perimeter of whose base is 11 cm and its height is twice the diameter?

a) 77 sq. cm b) 55 sq. cm
c) 44 sq. cm d) 40 sq. cm

6. The ratio of the total surface area to lateral surface area of a cylinder, whose radius is 80 cm and height is 20 cm, is:

a) 3 : 1 b) 2 : 1
c) 4 : 1 d) 5 : 1

7. If the areas of the adjacent faces of a rectangular block are in the ratio of 2 : 3 : 4 and its volume is 9,000 cm^3, then the length of the shortest side is:

a) 35 cm b) 25 cm
c) 15 d) 5

8. A sphere and a cube have equal surface area. Find the ratio of their volumes?

a) 6 : 2π−−√ b) √ 6: π
c) √ 6: π−−√ d) 6 : 5π

9. If the total surface area of a hemisphere is 27π27π square cm, then the radius of the base of the hemisphere is:

a) 33–√3cm b) 9 cm
c) 93–√3cm d) 3 cm

10. The base of a prism is a right angled triangle with two sides 5 cm and 12 cm. The height of the prism is 10 cm. The total surface area of the prism is:

a) 360 sq.cm. b) 300 sq.cm.
c) 330 sq.cm. d) 325 sq.cm.

11. A right triangle with sides 3 cm, 4 cm and 5 cm is rotated the side of 3 cm to form a cone. The volume of the cone so formed is:
a) 12π cm^3 b) 15π cm^3
c) 16π cm^3 d) 20π cm^3

12. In a shower, 5 cm of rain falls. The volume of water that falls on 1.5 hectares of ground is:
a) 75 cu. m b) 750 cu. m
c) 7500 cu. m d) 75000 cu. m

13. A hall is 15 m long and 12 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:
a) 720 b) 900
c) 1200 d) 1800

14. 66 cubic centimetres of silver is drawn into a wire 1 mm in diameter. The length of the wire in metres will be:
a) 84 b) 90
c) 168 d) 336

15.A hollow iron pipe is 21 cm long and its external diameter is 8 cm. If the thickness of the pipe is 1 cm and iron weighs 8 g/cm^3, then the weight of the pipe is:
a) 3.6 kg b) 3.696 kg
c) 36 kg d) 36.9 kg

16. 50 men took a dip in a water tank 40 m long and 20 m broad on a religious day. If the average displacement of water by a man is 4 m^3, then the rise in the water level in the tank will be:
a) 20 cm b) 25 cm
c) 35 cm d) 50 cm

17. The slant height of a right circular cone is 10 m and its height is 8 m. Find the area of its curved surface.
a) 30π m^2 b) 40π m^2
c) 60π m^2 d) 80π m^2

18. A cistern 6m long and 4 m wide contains water up to a depth of 1 m 25 cm. The total area of the wet surface is:
a) 49 m^2 b) 50 m^2
c) 53.5 m^2 d) 55 m^2

19. A metallic sheet is of rectangular shape with dimensions 48 m x 36 m.

From each of its corners, a square is cut off so as to make an open box. If the length of the square is 8 m, the volume of the box (in m^3) is:

a) 4830 b) 5120
c) 6420 d) 8960

20. The volume of a cube is 1728 cc. Find its surface.

a) 864 Sq.cm b) 648 Sq.cm
c) 486 Sq.cm d) 468 Sq.cm

21. The edge of three cubes of metal is 3 dm, 4 dm and 5 dm. They are melted and formed into a single cube. Find the edge of the new cube?

a) 3 dm b) 4 dm
c) 5 dm d) 6 dm

22. Find the volume of a cube of side length 10cm

a) 1000 Cu.cm b) 1825 Cu.cm
c) 1800 Cu.cm d) 2000 Cu.cm

23. An adhesive compound in liquid form is prepared in a container of hemispherical shape having a radius of 180 cm. This compound is to be packed in cylindrical bottles of radius 1 cm and height of 4 cm. How many bottles are needed if the liquid prepared exactly fills the container? [Take π = 3.]

a) 1.94 b) 388800
c) 972000 d) 16200

24. How many iron rods, each of length 7 m and diameter 2 cm can be made out of 0.88 cubic metre of iron.

a) 400 b) 800
c) 1200 d) 1600

25. The edges of cuboid are 4 cm; 5 cm and 6 cm. Find its surface area?

a) 120 Sq.cm b) 148 Sq.cm
c) 74 Sq.cm d) 15 Sq.cm