Mensuration

1. The ratio of the diameter of base and height of a cylinder is 2 : 3. Find the radius of the cylinder if the approximate volume of cylinder is 3234.01 cm^3 ?
(A) 21/2 cm **(B)** 7/2 cm
(C) 21 cm **(D)** 7 cm
(E) 14 cm

2. 8 discs of same size are kept one above another to form a cylinder. Volume of cylinder formed is 616 while diameter of disc is 7 cm then find the thickness of each disc?
(A) 16cm **(B)** 0.5cm
(C) 1cm **(D)** 4cm
(E) 2cm

3. The radius of a semicircle is equal to the radius of a sphere whose surface area is 616 cm^2 and height of a cylinder is 150% more than radius of semicircle and ratio of height to radius of cylinder is 5 : 1. Then find radius of cylinder? (in cm)
(A) 14 **(B)** 7.5
(C) 3 **(D)** 3.5
(E) 5.5

4. A well of 16m diameter is dug for 9m deep. The soil taken out of it has spread evenly all – around of well in shape of circular ring of width 4m to form an Embankment. Find the height of Embankment
(A) 8.1 m **(B)** 6.3 m
(C) 13.09m **(D)** 7.2m
(E) 9m

5. The radius and height of a cylinder are increased by 12% and 17% respectively. Find the percentage increase in its curved surface area.
(A) 31.04% **(B)** 28.03%
(C) 37.04% **(D)** 40.37%
(E) 32.04%

6. Ratio of diameter and height of a cylinder is 4 : 5. If diameter is increased by 50% then it curved surface area is increased by 160π. Find the volume of cylinder.
(A) 660π **(B)** 1280 π
(C) 540 π **(D)** 190 π
(E) 220 π

7. The ratio of diameter and height of a right circular cylinder is 4 : 3. If diameter of the cylinder get reduced by 25% then its total surface area reduced to 318.5π square meter. What is the circumference of the base of the cylinder.
(A) 28 π cm^2 **(B)** 14 π cm^2
(C) 35 π cm^2 **(D)** 7 π cm^2
(E) None of these

8. The diagonal of a square is equal to height of cylinder of volume 500π cm^3. If radius of cylinder is 10 cm, then find perimeter of square.
(A) $10/\sqrt{2}$cm **(B)** $5\sqrt{2}$ cm
(C) $10\sqrt{2}$ cm **(D)** $5/\sqrt{2}$ cm
(E) $20\sqrt{52}$ cm

9. Find the volume of a cylinder having radius 7 cm while its height is equal to diagonal of square of area 64 sq.cm.
(A) $1232\sqrt{2}$ cm^2 **(B)** $1231\sqrt{2}$ cm^3
(C) $1238\sqrt{6}$ cm^3 **(D)** $1232\sqrt{3}$ cm^3
(E) $1228\sqrt{2}$ cm^3

10. If the ratio of curved surface area to the volume of cylinder is 2 : 21 while the ratio of diameter to the height of cylinder is 7:3. Find the total surface area of cylinder?
(A) 5150 **(B)** 5148
(C) 5146 **(D)** 5140
(E) None of the above

11. If the ratio of curved surface area to the volume of cylinder is 4:7 while the ratio of diameter to the height of cylinder is 14:5. Find the total surface area of cylinder.?
(A) 140 units **(B)** 130 units
(C) 123 units **(D)** 132 units
(E) None of these

12. If the ratio of curved surface area to the volume of cylinder 1 : 7 while the ratio of diameter to the height of cylinder is 4 : 3. Find total surface area of cylinder?
(A) 3100 **(B)** 3180
(C) 3000 **(D)** 3080
(E) None of these

13. Ratio between magnitude of volume of a cylinder to the magnitude of curved surface area of the cylinder is 7 : 2. find the total surface area of the cylinder if height of cylinder is double than that of the radius of the cylinder
(A) 968 unit^2 **(B)** 814 unit^2
(C) 950 unit^2 **(D)** 616 unit^2
(E) 924 unit^2

14. The total surface area of cube is 1176 cm^2 If height of cylinder is 50% more than the side of cube and ratio of height and radius of cylinder are given as 7 : 3 then find the total surface area of cylinder? (incm^2)
(A) 720π **(B)** 480π
(C) 540 π **(D)** 640 π
(E) 560 π

15. The ratio of height and radius of a cylinder is 2 : 5 and diameter of cylinder is equal to the diagonal of square whose area is 400 m². Then find the volume of cylinder
(A) 400 √2 π **(B)** 700 √2 π
(C) 600 π **(D)** 800 √2 π
(E) 1000 √2 π

16. If perimeter of the base of a cylinder is 66 cm. Then find volume of cylinder if height of cylinder is 0.04 m
(A) 1111 cm^2 **(B)** 1386 cm^2
(C) 2046 cm^2 **(D)** 1186 cm^2
(E) 2002 cm^2

17. Radius of a cylinder is equal to the side of an equilateral triangle having area 16 $\sqrt{3}$cm^2 and height of the cylinder is equal to the perimeter of the triangle. Then find the volume of cylinder.
(A) 1536 π sq. cm **(B)** 1518 π sq. cm
(C) 1620 π sq. cm **(D)** 1460 π sq. cm
(E) 1548 π sq. cm

18. A cylindrical vessel with radius and height of 17.5 cm and 18 cm respectively is filled upto 80% of its capacity with milk. If total milk from cylindrical vessel transferred into 30 cuboidal vessels whose length and breadth is 7 cm & 3 cm respectively. Find height of each cuboidal vessel?
(A) 18 cm **(B)** 25 cm
(C) 23 cm **(D)** 20 cm
(E) 22 cm

19. Sum of length, breadth and height of cuboid is 12 cm and length of its diagonal is 5√2. Then find the total surface area of cuboid.
(A) 94 cm^2 **(B)** 84 cm^2
(C) 72 cm^2 **(D)** 64 cm^2
(E) 90 cm^2

20. What is the ratio of the volume of the cube to the volume of the cuboid?
Statement I: The Total Surface Area of the cuboid is 550 cm2 and the ratio of the length, breadth and height of the cuboid is 2 : 3 : 1.
Statement II: The Total Surface Area of the cube is 384 cm2.
Statement III: The breadth of the cuboid is 1.5 times of the length of the cuboid and 3 times of the height of the cuboid. The difference

between the height and the length of the cuboid is 5 cm.
(A) Statement II and III are sufficient to answer the question.
(B) Statement I and II are sufficient to answer the question.
(C) Either statement I or III and statement II are sufficient to answer the question.
(D) Either statement II or III and statement I are sufficient to answer the question.
(E) All the statements are required to answer the question.