Cosmo School

Work Sheet – 07 (Mathematics) for class – Nine (22.10.2020) Chapter- Sixteen, Exercise - 16.4 Mensuration

Creative Multiplication Choice Questions

1. What is the volume of a cube which sides is 1 cm? [S.B.- 20, 17]

a) 1 b) 3
c) 6 d) 9

The radius of a right circular cylinder is 3 cm and the height is 5 cm.

Answer to the questions No. (2 – 3) according to the information:

2. What is the value of the cylinder? [B.B.- 20]

a) 15π cm^3 b) 25π cm^3
c) 45π cm^3 d) 75π cm^3

3. The cylinder – [B.B.- 20]

i. Circumference of the base is 3π cm.
ii. Area of the base 9π square cm.
iii. Area of curved surface is 30π square cm.

Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

4. The volume of a cube is $24\sqrt{3}$ cubic cm. What is the length of its diagonal? [R.B.- 19]

a) $2\sqrt{3}$ cm b) $3\sqrt{2}$ cm
c) 6 cm d) 18 cm

5. If the radius of a right circular cylinder is 4 cm and height is 12 cm. Which is the area of the curved surface? [Dj.B.- 19]

a) 96π cm^2 b) 128π cm^2
c) 192π cm^2 d) 384π cm^2

6. If the height of a right circular cylinder is 12 cm and radius of the base is 5 cm. What is area of the curved surface? [S.B.- 19]

a) 10π sq. cm b) 24π sq. cm.
c) 60π sq. cm d) 120π sq. cm

7. The area of the whole surface of a cube is 150 cm^2. What is the length of its diagonal? [J.B.- 19]

a) 5 cm b) 7.07 cm.
c) 8.66 cm d) 25 cm

8. If the height of a cylinder is 8 cm and radius the base is 4 cm then - [Ctg.B.- 19]

i. The area of the whole surface of it is 301.59 square cm.
ii. The area of the curved surface of it is 201.06 square cm.
iii. The volume of it is 100.53 cube cm.

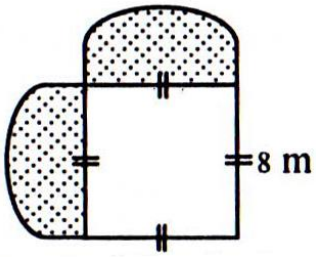
Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

9. The length of diagonal of the surface of a cube is $8\sqrt{2}$ cm then what is the cubes diagonal in cm? [All B.- 18]

a) $\frac{8}{\sqrt{3}}$ b) $\frac{8}{\sqrt{2}}$
c) $8\sqrt{3}$ d) 24

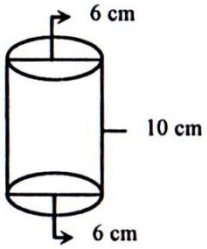
10.



What is the area of the dark marked region in the above figure in square metre? [J.B.- 17]

a) 25.13 (app) b) 50.27 (app)
c) 100.53 (app) d) 201.0b(app)

11.



What is the area of the curve surface in square cm in the above solid? [J.B.- 17]

a) 28.27 (app) b) 56.55 (app)
c) 188.5 (app) d) 282.7 (app)

12. The area of the whole surface of a cube is 216 m^2. Its volume is- [B.B.- 17]

a) $6\sqrt{6}$ m^3 b) 36 m^3

c) 216 m^3 d) 144 m^3

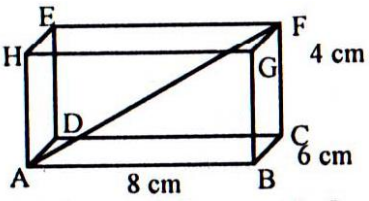
13. The weight of 1 cubic cm wood is 7 decigrams. What is the percentage of the weight of wood to the equivalent volume of water? [R.B.- 16]

a) 7 b) 10
c) 30 d) 70

14. A cube whose edge is 5 cm then what is the length of the diagonal of it? [S.B.- 16]

a) 3.87 cm b) 7.07 cm
c) 8.66 cm d) 15.03 cm

In the figure ABCDEFGH is a rectangular parallelepiped.



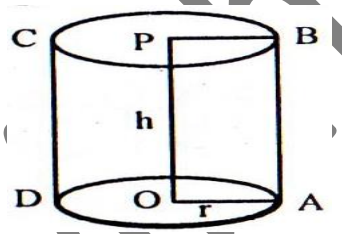
According to above information answer to the questions no. (15 – 16):

15. What is the volume in cm^3? [D.B.- 16]

a) 104 b) 144
c) 192 d) 208

16. What is the length of AF in cm? [D.B.- 16]

a) 7.21 b) 10.77
c) 10 d) 12



Observe the figure ABCD is a right-circular cylinder. O is the centre of the base. Cap the radius of the base is r unit and height of the cylinder is h unit. Now answer to the questions No. (17 – 18):

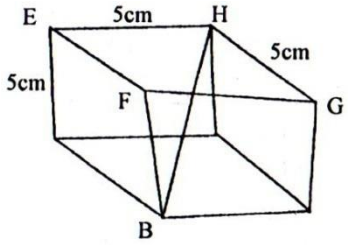
17. How many surfaces has it? [Dj.B.- 16]

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

18. What is the whole surface area of cylinder? [Dj.B.- 16]

a) πr^2 b) $2\pi rh$
c) $\pi r(r + h)$ d) $2\pi r(r + h)$

According to the following figure answer to the questions No. (19 – 20):



19. How many lines of symmetry of the plane EFGH? [Ctg.B.- 16]

a) 8 b) 4
c) 3 d) 2

20. What is the length of BH? [Ctg.B.- 16]

a) 4.47 cm (Approx)
b) 6.71 cm (Approx)
c) 7.07 cm (Approx)
d) 8.66 cm (Approx)

21. If the height of a right circular cylinder is 1 metre and radius of the base is 1 metre, its — [Ctg.B.- 16]

i. Area of the curved surface is 6.2832 square metre.
ii. The volume is 3.1416 cubic meter.
iii. Area of base is 3.1416 square metre.

Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

22. For a cylinder (Where height = h and radius = r) [R.B.- 15]

i. Curved surface area = $2\pi rh$.
ii. Volume = $\pi r^2 h$.
iii. Whole surface area = $(\pi r^2 + 2\pi rh)$

Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

23. The height of cylinder is 13 cm and its radius are 6 cm then — [Dj.B.- 15]

i. The land of area is 113.10 square cm.
ii. Area of the whole surface is 490.09 square cm.
iii. Volume is 1470.27 cubic cm.

Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

24. The length of diagonal of a cube is $6\sqrt{3}$ metre then what is the volume of the cube? [R.B.- 15]

a) 36 b) 144
c) 216 d) 512

25. How many surfaces are there in a rectangular solid? [J.B.- 15]

a) 2 b) 3
c) 4 d) 6

26. If the side of cube is x then what is the area of full surface of the cube? [D.B.- 15]

a) x^2 b) $3x^2$
c) $4x^2$ d) $6x^2$

27. A cube whose edge is 3 cm then what is the diagonal of it? [Ctg.B.- 15]

a) $2\sqrt{3}$ b) $3\sqrt{2}$
c) $3\sqrt{3}$ d) 9

28. The length and width of two adjacent sides of a parallelogram are 7 cm and 5 cm respectively. What is the half of its perimeter in cm?

a) 12 b) 20
c) 24 d) 28

29. The length of the side of an equilateral triangle is 6 cm. What is its area (cm^2)?

a) $3\sqrt{3}$ b) $4\sqrt{3}$
c) $6\sqrt{3}$ d) $9\sqrt{3}$

30. In planar geometry then —

i. Each angle of equilateral triangle is less than a right angle.
ii. Sum of acute angles of right-angled triangle is one right angle.
iii. An exterior angle of a triangle formed by extending one side of triangle is greater than the opposite interior angles.

Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

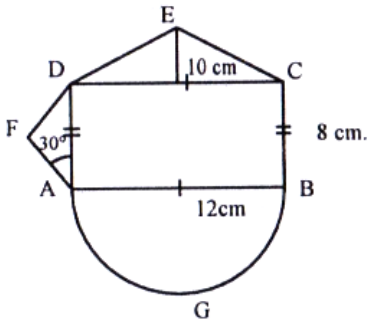
31. If the length of each side of a square is a and diagonal is d then —

i. Its area is a^2 square unit.
ii. Perimeter 2ad unit.
iii. d = $\sqrt{2}a$

Which one of the following is correct?

a) i and ii b) i and iii
c) ii and iii d) i, ii and iii

Answer the following questions No. (30 - 32) as per information from the picture below:



32. What is the length of the diagonal of the rectangle ABCD in cm?

a) 13 b) 14
c) 14.4 d) 15

33. If AF = DF = 16 cm then what is the area of the triangle ADF in square cm?

a) 16 b) 32
c) 64 d) 128

34. What is the circumference of the half circle AGB in cm?

a) 18 b) 18.85 (approx.
c) 37.7 (approx.) d) 96

35. If the diagonal of cube is $3\sqrt{3}$ cm then what is the volume of the cube?

a) $3\sqrt{3}$ cm^3 b) 9 cm^3
c) $9\sqrt{3}$ cm^3 d) 27 cm^3

36. The area of the surface of a cube is 72 square cm. What is the length of the diagonal of the cube?

a) 12 cm b) $6\sqrt{3}$ cm
c) 6 cm d) 3 cm

37. If the diagonal of cube is $3\sqrt{3}$ cm. What is the area of the whole surface?

a) 27 m^2 b) 48 m^2
c) 54 m^2 d) 108 m^2

38. If each edge of a cube is 3 cm then which one is the length of its diagonal?

a) $2\sqrt{3}$ b) $3\sqrt{2}$ cm
c) $3\sqrt{3}$ cm d) 9 cm