Mensuration

Q1. The shape of an ice-cream cone is a combination of:

(a) Sphere + cylinder (b) Sphere + cone

(c) Hemisphere + cylinder (d) Hemisphere + cone

Q2. If we cut a cone in two parts by a plane parallel to the base, then the bottom part left over is the:

(a) Cone (b) Frustum of cone (c) Sphere (d) Cylinder

Q3. If we change the shape of an object from a cylinder to cone, then the volume of cone will:

(a) Increase (b) Decrease (c) Remains unchanged (d) Doubles

Q4. Find the area of a rhombus whose diagonals are given to be of lengths 6 cm and 7 cm.

(a) 30 cm^2 (b) 21 cm^2 (c) 28 cm^2 (d) 42 cm^2

Q5. Find the radius of a circle whose circumference is given to be 95 cm (take pi= 3.14).

(a) 18.32 cm (b) 14.91 cm (c) 15.13 cm (d) 15.41 cm

Q6. Find the breadth of a cuboid when the volume is given to be 64 m^3 for length and height given as 8 m and 2 m, respectively.

(a) 8 m (b) 2 m (c) 4 m (d) 6 m

Q7. If a cylinder is covered by two hemispheres shaped lid of equal shape, then the total curved surface area of the new object will be:

(a) $4\pi rh + 2\pi r^2$ (b) $4\pi rh - 2\pi r^2$ (c) $2\pi rh + 4\pi r^2$ (d) $2\pi rh + 4\pi r$

Q8. The area of a rhombus whose diagonals are of lengths 10 cm and 8.2 cm is:

(a) 41 cm^2 (b) 82 cm^2 (c) 410 cm^2 (d) 820 cm^2

Q9. The area of a rhombus is 240 cm^2 and one of the diagonals is 16 cm. Find the other diagonal.

(a) 16 cm (b) 20 cm (c) 30 cm (d) 36 cm

Q10. The height of a cylinder whose radius is 7 cm and the total surface area is 968 cm^2 is:

(a) 15 cm (b) 17 cm (c) 19 cm (d) 21 cm

Q11. The height of a cuboid whose volume is 275 cm^3 and base area is 25 cm^2 is:

(a) 10 cm (b) 11 cm (c) 12 cm (d) 13 cm

Q12. Find the height of a regular cylinder whose radius is 14 cm and the total surface area is 4342 cm^2 is:

(a) 33.61 cm (b) 29.45 cm (c) 35.34 cm (d) 39.41 cm

Q13. Find the perimeter of the largest circle that can fit inside a square with the side 7cm (take pi = 22/7).

(a) 14 cm (b) 24 cm (c) 28 cm (d) 22 cm

Q14. The area of a trapezium is 480 cm^2, the distance between two parallel sides is 15 cm and one of the parallel side is 20 cm. The other parallel side is:

(a) 20 cm (b) 34 cm (c) 44 cm (d) 50 cm

Q15. If a cuboidal box has height, length and width as 20 cm, 15 cm and 10 cm respectively. Then its total surface area is:

(a) 1100 cm^2 (b) 1200 cm^2 (c) 1000 cm^2 (d) None of these

Q16. The area of a trapezium is 1240 m^2. The distance between the two pairs of parallel sides is given to be 20 m. If the length of one of the parallel sides is 60 m, find the length of the other parallel side.

(a) 68 m (b) 54 m (c) 64 m (d) 70 m

Q17. 2 cubes each of volume 64 cm^3 are joined end to end. Find the surface area of the resulting cuboid?

(a) 96 cm^3 (b) 160 cm^3 (c) 192 cm^3 (d) 48 cm^3

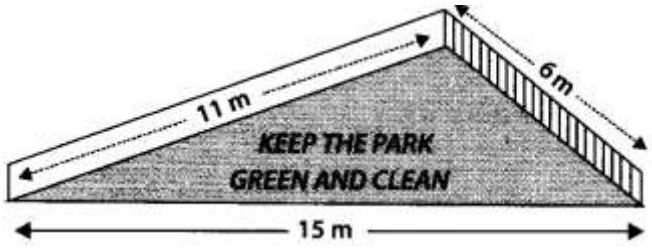
Q18. How many cubes with an edge length of 2 cm can fit inside a cuboid with dimensions of length, breadth and height given to be 8 m, 6 m, and 10 m, respectively?

(a) 60000 (b) 60000000 (c) 600000 (d) 6000

Q19. A traffic signal board, indicating 'SCHOOL AHEAD', is an equilateral triangle with side a. Find the area of the signal board, using Heron's formula.If its perimeter is 180 cm, what will be the area of the signal board?

(a) 1400 cm^2 (b) 1500 cm^2 (c) $900\sqrt{3}$ cm^2 (d) None of these

Q20. There is a slide in a park. One of its side Company hired one of its walls for 3 months.walls has been painted in some colour with a message "KEEP THE PARK GREEN AND CLEAN" (see figure). If the sides of the wall are 15 m, 11 m and 6m, find the area painted in colour.



(a) $20\sqrt{2}\ m^2$ (b) 30 m^2 (c) $40\sqrt{2}$ (d) None of these

Q21. The length, breadth and height of a room are 5 m, 4 m and 3 m, respectively. Find the cost of white washing the walls of the room and the ceiling at the rate of Rs. 17.50 per m^2.

(a) Rs. 550 (b) Rs. 555 (c) Data inadequate (d) None of these

Q22. A vessel is in the form of a hollow hemisphere mounted by a hollow cylinder. The diameter of the hemisphere is 14 cm and the total height of the vessel is 13 cm. Find the inner surface area of the vessel.

(a) 572 cm^2 (b) 560 cm^2 (c) Data inadequate (d) None of these

Q23. A toy is in the form of a cone of radius 3.5 cm mounted on a hemisphere of the same radius. The total height of the toy is 15.5 cm. Find the total surface area of the toy.

(a) 77 cm^2 (b) 137.5 cm^2 (c) 214.5 cm^2 (d) 275 cm^2

Q24. A medicine capsule is in the shape of a cylinder with two hemispheres stuck to each of its ends. The length of the entire capsule is 14 mm and the diameter of the capsule is 5 mm. Find its surface area.

(a) 200 mm^2 (b) 220 mm^2 (c) 222 mm^2 (d) None of these

Q25. A tank is made of the shape of a cylinder with a hemispherical depression at one end. The height of the cylinder is 1.45 m and radius is 30 cm. The total surface area of the tank is:

(a) 30 m^2 (b) 3.3 m^2 (c) 30.3 m^2 (d) 3300 m^2

Answer key

1	D	6	C	11	B	16	C	21	B
2	B	7	C	12	D	17	B	22	A
3	C	8	A	13	D	18	B	23	C
4	B	9	C	14	C	19	C	24	B
5	C	10	A	15	D	20	A	25	B

Reference :

-Collegedunia.com

- NCERT

- Byju's