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DAILY PRACTICE PAPER

MCQ WORKSHEET-I
SURFACE AREAS AND VOLUMES

MATHEMATICS
10THCBSE

1. The surface area of a cuboid is
    (a) 2(lb + bh + lh)   (b) 3(lb + bh + lh)   (c) 2(lb – bh – lh)   (d) 3(lb – bh – lh)

2. The surface area of a cube if edge 'a' is
    (a) $7a^2$ (b) $6a^2$ (c) $5a^3$ (d) $5a^2$

3. The length, breadth and height of a room is 5m, 4m and 3m. The cost of white washing its four walls at the rate of Rs. 7.50 per m^2 is
    (a) Rs. 110   (b) Rs. 109   (c) Rs. 220   (d) Rs. 105

4. The perimeter of floor of rectangular hall is 250m. The cost of the white washing its four walls is Rs. 15000. The height of the room is
    (a) 5m   (b) 4m   (c) 6m   (d) 8m

5. The breadth of a room is twice its height and is half of its length. The volume of room is 512dm^3. Its dimensions are
    (a) 16 dm, 8 dm, 4 dm   (b) 12 dm, 8 dm, 2 dm
    (c) 8 dm, 4 dm, 2 dm   (d) 10 dm, 15 dm, 20 dm

6. The area of three adjacent faces of a cube is x, y and z. Its volume V is
    (a) V = xyz   (b) V^3 = xyz   (c) V^2 = xyz   (d) none of these

7. Two cubes each of edge 12 cm are joined. The surface area of new cuboid is
    (a) 140 cm^2 (b) 1440 cm^2 (c) 144 cm^2 (d) 72 cm^2

8. The curved surface area of cylinder of height 'h' and base radius 'r' is
    (a) 2πrh   (b) πrh   (c) $\frac{1}{2}$πrh   (d) none of these

9. The total surface area of cylinder of base radius 'r' and height 'h' is
    (a) 2π(r + h)   (b) 2πr(r + h)   (c) 3πr(r + h)   (d) 4πr(r + h)

10. The curved surface area of a cylinder of height 14 cm is 88 cm^2. The diameter of its circular base is
    (a) 5cm   (b) 4cm   (c) 3cm   (d) 2cm

11. It is required to make a closed cylindrical tank of height 1 m and base diameter 140cm from a metal sheet. How many square meters a sheet are required for the same?
    (a) 6.45m^2 (b) 6.48m^2 (c) 7.48m^2 (d) 5.48m^2.

12. A metal pipe is 77 cm long. Inner diameter of cross section is 4 cm and outer diameter is 4.4 cm. Its inner curved surface area is:
    (a) 864 cm^2 (b) 968 cm^2 (c) 768 cm^2 (d) none of these

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MCQ WORKSHEET-II
SURFACE AREAS AND VOLUMES

MATHEMATICS
10THCBSE

1. The diameter of a roller is 84 cm and its length is 120 cm. It takes 500 complete revolutions to move once over to level a playground. The area of the playground in m^2 is:
    (a) 1584   (b) 1284   (c) 1384   (d) 1184

2. A cylindrical pillar is 50 cm in diameter and 3.5 m in height. The cost of painting its curved surface at the rate of Rs. 12.50 per m^2 is:
    (a) Rs. 68.75   (b) Rs. 58.75   (c) Rs. 48.75   (d) Rs. 38.75

3. The inner diameter of circular well is 3.5m. It is 10m deep. Its inner curved surface area in m^2 is:
    (a) 120   (b) 110   (c) 130   (d) 140

4. In a hot water heating system there is a cylindrical pipe of length 28 m and diameter 5 cm. The total radiating surface area in the system in m^2 is:
    (a) 6.6   (b) 5.5   (c) 4.4   (d) 3.4

5. The curved surface area of a right circular cone of slant height 10 cm and base radius 7 cm is
    (a) 120 cm^2 (b) 220 cm^2 (c) 240 cm^2 (d) 140 cm^2

6. The height of a cone is 16 cm and base radius is 12 cm. Its slant height is
    (a) 10 cm   (b) 15 cm   (c) 20 cm   (d) 8 cm

7. The curved surface area of a right circular cone of height 16 cm and base radius 12 cm is
    (a) 753.6 cm^2 (b) 1205.76 cm^2 (c) 863.8 cm^2 (d) 907.6 cm^2

8. The curved surface area of a right circular cone of slant height 10 cm and base radius 10.5 cm is
    (a) 185 cm^2 (b) 160 cm^2 (c) 165 cm^2 (d) 195 cm^2

9. The slant height of a cone is 26 cm and base diameter is 20 cm. Its height is
    (a) 24 cm   (b) 25 cm   (c) 23 cm   (d) 35 cm

10. The curved surface area of a cone is 308 cm^2 and its slant height is 14 cm. The radius of its base is
    (a) 8 cm   (b) 7 cm   (c) 9 cm   (d) 12 cm

11. A conical tent is 10 m high and the radius of its base is 24 m. The slant height of tent is
    (a) 26 m   (b) 28 m   (c) 25 m   (d) 27 m

12. The slant height and base diameter of a conical tomb are 25 m and 14 m respectively. The cost of white washing its curved surface at the rate of Rs. 210 per 100 m^2 is
    (a) Rs. 1233   (b) Rs. 1155   (c) Rs. 1388   (d) Rs. 1432

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MCQ WORKSHEET-III
SURFACE AREAS AND VOLUMES

MATHEMATICS
10TH CBSE

1. A joker's cap is in the form of cone of base radius 7 cm and height 24 cm. The area of sheet to make 10 such caps is
   (a) 5500 cm^2 (b) 6500 cm^2 (c) 8500 cm^2 (d) 3500 cm^2

2. A solid right cylinder cone is cut into two parts at the middle of its height by a plane parallel to its base. The ratio of the volume of the smaller cone to the whole cone is
   (a) 1 : 2   (b) 1 : 4   (c) 1 : 6   (d) 1 : 8

3. The total surface area of a hemisphere of radius 'r' is
   (a) $2\pi r^2$ (b) $4\pi r^2$ (c) $3\pi r^2$ (d) $5\pi r^2$

4. The curved surface area of a sphere of radius 7 cm is:
   (a) 516 cm^2 (b) 616 cm^2 (c) 716 cm^2 (d) 880 cm^2

5. The curved surface area of a hemisphere of radius 21 cm is:
   (a) 2772 cm^2 (b) 2564 cm^2 (c) 3772 cm^2 (d) 4772 cm^2

6. The curved surface area of a sphere of radius 14 cm is:
   (a) 2464 cm^2 (b) 2428 cm^2 (c) 2464 cm^2 (d) none of these.

7. The curved surface area of a sphere of diameter 14 cm is:
   (a) 516 cm^2 (b) 616 cm^2 (c) 716 cm^2 (d) 880 cm^2

8. Total surface area of hemisphere of radius 10 cm is
   (a) 942 cm^2 (b) 940 cm^2 (c) 842 cm^2 (d) 840 cm^2

9. The radius of a spherical balloon increases from 7 cm to 14 cm s air is being pumped into it. The ratio of surface area of the balloon in the two cases is:
   (a) 4 : 1   (b) 1 : 4   (c) 3 : 1   (d) 1 : 3

10. A matchbox measures 4 cm x 2.5 cm x 1.5 cm. The volume of packet containing 12 such boxes is:
    (a) 160 cm^3 (b) 180 cm^3 (c) 160 cm^2 (d) 180 cm^2

11. A cuboidal water tank is 6 m long, 5 m wide and 4.5 m deep. How many litre of water can it hold?
    (a) 1350 liters   (b) 13500 liters   (c) 135000 liters   (d) 135 liters

12. A cuboidal vessel is 10 m long and 8 m wide. How high must it be made to hold 380 cubic metres of a liquid?
    (a) 4.75 m   (b) 7.85 m   (c) 4.75 cm   (d) none of these

13. The capacity of a cuboidal tank is 50000 litres. The length and depth are respectively 2.5 m and 10 m. Its breadth is
    (a) 4 m   (b) 3 m   (c) 2 m   (d) 5 m

14. A godown measures 40 m × 25 m × 10 m. Find the maximum number of wooden crates each measuring 1.5 m × 1.25 m × 0.5 m that can be stored in the godown.
    (a) 18000   (b) 16000   (c) 15000   (d) 14000

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MCQ WORKSHEET-IV
SURFACE AREAS AND VOLUMES

MATHEMATICS
10TH CBSE

1. A river 3 m deep and 40 m wide is flowing at the rate of 2 km per hour. How much water will fall into the sea in a minute?
   (a) 4000 m^3 (b) 40 m^3 (c) 400 m^3 (d) 40000 m^3

2. The circumference of the base of a cylindrical vessel is 132 cm and its height is 25 cm. How many litres of water can it hold?
   (a) 33.75 litre (b) 34.65 litre   (c) 35.75 litre   (d) 38.75 litre

3. If the lateral surface of a cylinder is 94.2 cm2 and its height is 5 cm, then find radius of its base
   (a) 5cm   (b) 4cm   (c) 3cm   (d) 6cm

4. It costs Rs 2200 to paint the inner curved surface of a cylindrical vessel 10 m deep. If the cost of painting is at the rate of Rs 20 per m2, find radius of the base,
   (a) 1.75 m   (b) 1.85 m   (c) 1.95 m   (d) 1.65 m

5. The height and the slant height of a cone are 21 cm and 28 cm respectively. Find the volume of the cone.
   (a) 5546 cm^3 (b) 7546 cm^3 (c) 5564 m^3 (d) 8546 cm^3

6. Find the volume of the right circular cone with radius 6 cm, height 7 cm
   (a) 254 cm^3 (b) 264 cm^3 (c) 274 cm^2 (d) 284 cm^3

7. The radius and height of a conical vessel are 7 cm and 25 cm respectively. Its capacity in litres is
   (a) 1.232 litre (b) 1.5 litre   (c) 1.35 litre   (d) 1.6 litre

8. The height of a cone is 15 cm. If its volume is 1570 cm3, find the radius of the base.
   (a) 12 cm   (b) 10 cm   (c) 15 cm   (d) 18 cm

9. If the volume of a right circular cone of height 9 cm is 48π cm^3, find the diameter of its base.
   (a) 12 cm   (b) 10 cm   (c) 6 cm   (d) 8 cm

10. A conical pit of top diameter 3.5 m is 12 m deep. What is its capacity in kilolitres?
    (a) 38.5 kl   (b) 48.5 kl   (c) 39.5 kl   (d) 47.5 kl

11. Find the capacity in litres of a conical vessel with radius 7 cm, slant height 25 cm
    (a) 1.232 litre (b) 1.5 litre   (c) 1.35 litre   (d) none of these

12. The diameter of the moon is approximately one-fourth of the diameter of the earth. What fraction of the volume of the earth is the volume of the moon?
    (a) $\dfrac{1}{64}$ (b) $\dfrac{1}{32}$ (c) $\dfrac{1}{16}$ (d) $\dfrac{1}{48}$

13. The dimensions of a cuboid are 50 cm x 40 cm x 10 cm. Its volume in litres is:
    (a) 10 litres   (b) 12 litres   (c) 20 litres   (d) 25 litres

14. The volume of a cuboidal tank is 250 m^3. If its base area is 50 m^2 then depth of the tank is
    (a) 5 m   (b) 200 m   (c) 300 m   (d) 12500 m

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MCQ WORKSHEET-V
SURFACE AREAS AND VOLUMES

MATHEMATICS
10TH CBSE

1. The length, breadth and height of a cuboidal solid is 4 cm, 3 cm and 2 cm respectively. Its volume is

   (a) $(4 + 3 + 2)$ cm^3 (b) $2(4 + 3 + 2)$ cm^3 (c) $(4 \times 3 \times 2)$ cm^3 (d) $2(4 + 3) \times 2$ cm^3

2. The volume of a cuboidal solid of length 8 m and breadth 5 m is 200 m^3. Find its height.

   (a) 5 m   (b) 6 m   (c) 15 m   (d) 18 m

3. The curved surface area of a sphere is 616 cm^2. Its radius is

   (a) 7 cm   (b) 5 cm   (c) 6 cm   (d) 8 cm

4. If radius of a sphere is $\dfrac{2d}{3}$ then its volume is

   (a) $\dfrac{32}{81}\pi d^3$ (b) $\dfrac{23}{4}\pi d^3$ (c) $\dfrac{32}{3}\pi d^3$ (d) $\dfrac{34}{3}\pi d^3$

5. The capacity of a cylindrical tank is 6160 cm^3. Its base diameter is 28 m. The depth of this tank is

   (a) 5 m   (b) 10 m   (c) 15 m   (d) 8 m

6. The volume of a cylinder of radius r and length h is:

   (a) $2\pi rh$ (b) $\dfrac{4}{3}\pi r^2 h$ (c) $\pi r^2 h$ (d) $2\pi r^2 h$

7. Base radius of two cylinder are in the ratio 2 : 3 and their heights are in the ratio 5 : 3. The ratio of their volumes is

   (a) 27 : 20   (b) 25 : 24   (c) 20 : 27   (d) 15 : 20

8. If base radius and height of a cylinder are increased by 100% then its volume increased by:

   (a) 30%   (b) 40%   (c) 42%   (d) 33.1%

9. The diameter of a sphere is 14 m. The volume of this sphere is

   (a) $1437\dfrac{1}{3}$ m^3 (b) $1357\dfrac{1}{3}$ m^3 (c) $1437\dfrac{2}{3}$ m^3 (d) $1337\dfrac{2}{3}$ m^3

10. The volume of a sphere is 524 cm^3. The diameter of sphere is

    (a) 5cm   (b) 4cm   (c) 3cm   (d) 7cm

11. The total surface area of a cylinder is 40π cm^2. If height is 5.5 cm then its base radius is

    (a) 5cm   (b) 2.5cm   (c) 1.5cm   (d) 10cm

12. The area of circular base of a right circular cone is 78.5 cm^2. If its height is 12 cm then its volume is

    (a) 31.4 cm^3 (b) 3.14 cm^3 (c) 314 cm^3 (d) none of these

13. The base radius of a cone is 11.3 cm and curved surface area is 355 cm^2. Its height is (Take $\pi = \dfrac{355}{113}$)

    (a) 5 cm   (b) 10 cm   (c) 11 cm   (d) 9 cm

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MCQ WORKSHEET-VI
SURFACE AREAS AND VOLUMES

MATHEMATICS
10THCBSE

1. If the dimensions of a cuboid are 3 cm, 4 cm and 10 cm, then its surface area is

   A. 82 cm^2 B. 123 cm^2 C. 164 cm^2 D. 216 cm^2

2. The volume of the cuboid in Q.1 is

   A. 17 cm^3 B. 164 cm^3 C. 120 cm^3 D. 240 cm^3

3. The surface area of a cuboid is 1372 sq. cm. If its dimensions are in the ratio of 4 : 2 : 1, then its length is

   A. 7 cm   B. 14 cm   C. 21 cm   D. 28cm

4. The base radius and height of a right circular cylinder are 7 cm and 13.5 cm. The volume of cylinder is

   A. 1579 cm^3 B. 1897 cm^3 C. 2079 cm^3 D. 2197 cm^3

5. The base radius of a cone is 5 cm and its height is 12 cm. Its slant height is

   A. 13 cm   B. 19.5 cm   C. 26 cm   D. 52cm

6. The curved surface area of a cylinder of height 14 cm is 88 sq. cm. The diameter of the cylinder is

   A. 0.5 cm   B. 1.0 cm   C. 1.5 cm   D. 2.0 cm

7. The lateral surface area of a right circular cone of height 28 cm and base radius 21 cm is

   A. 1155 cm^2 B. 1055 cm^2 C. 2110 cm^2 D. 2310 cm^2

8. The circumference of the base of a 8 m high conical tent is $\frac{264}{7}$ m^2. The area of canvas required to make the tent is

   A. $\frac{1360}{7}$ cm^2 B. $\frac{1360}{14}$ cm^2 C. 286 cm^2 D. 98 cm^2

9. The area of metal sheet required to make a closed hollow cone of height 24 m and base radius 7 m is

   A. 176 m^2 B. 352 m^2 C. 704 m^2 D. 1408 m^2

10. The diameter of a sphere whose surface area is 346.5 cm^2 is

    A. 5.25 cm   B. 5.75 cm   C. 11.5 cm   D. 10.5 cm

11. The radius of a spherical baloon increases from 7 cm to 14 cm when air is pumped into it. The ratio of the surface area of original baloon to inflated one is

    A. 1 : 2   B. 1 : 3   C. 1 : 4   D. 4 : 3

12. The circumference of the base of a cylinderical vessel is 132 cm and its height is 25 cm. If 1000 cu.cm = 1 liter, the number of litres, of water the vessel can hold is

    A.   17.325   B.   34.65   C.   34.5   D.   69.30

13. The number of litres of milk a hemispherical bowl of radius 10.5 cm can hold is

    A.   2.47   B.   2.476   C.   2.376   D.   3.476

14. The number of bricks, each measuring 18 cm × 12 cm × 10 cm are required to build a wall 12 m × 0.6 m × 4.5 m if $\dfrac{1}{10}$ of its volume is taken by mortar, is

    A.   15000   B.   13500   C.   12500   D.   13900

15. The radius of a sphere is 10 cm. If its radius is increased by 1 cm, the volume of the sphere is increased by

    A.   13.3%   B.   21.1%   C.   30%   D.   33.1%

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MCQ WORKSHEET-VII
SURFACE AREAS AND VOLUMES

MATHEMATICS
10THCBSE

1. The total surface area of a solid hemisphere of radius r is
   (A) πr^2 (B) $2\pi r^2$ (C) $3\pi r^2$ (D) $4\pi r^2$

2. The volume and the surface area of a sphere are numerically equal, then the radius of sphere is
   (A) 0 units   (B) 1 units   (C) 2 units   (D) 3 units

3. A cylinder, a cone and a hemisphere are of the same base and of the same height. The ratio of their volumes is
   (A) 1 : 2 : 3   (B) 2 : 1 : 3   (C) 3 : 1 : 2   (D) 3 : 2 : 1

4. Small spheres, each of radius 2cm, are made by melting a solid iron ball of radius 6cm, then the total number of small spheres is
   (A) 9   (B) 6   (C) 27   (D) 81

5. A solid sphere of radius r cm is melted and recast into the shape of a solid cone of height r. Then the radius of the base of cone is
   (A) 2r   (B) r   (C) 4r   (D) 3r

6. Three solid spheres of diameters 6cm, 8cm and 10cm are melted to form a single solid sphere. The diameter of the new sphere is
   (A) 6 cm   (B) 4.5 cm   (C) 3 cm   (D) 12 cm

7. The radii of the ends of a frustum of a cone 40 cm high are 38 cm and 8 cm. The slant height of the frustum of cone is
   (A) 50 cm   (B) $10\sqrt{7}$ cm   (C) 60.96 cm   (D) $4\sqrt{2}$ cm

8. The circular ends of a bucket are of radii 35 cm and 14 cm and the height of the bucket is 40 cm. Its volume is
   (A) 60060 cm^3 (B) 80080 cm^3 (C) 70040 cm^3 (D) 80160 cm^3

9. If the radii of the ends of a bucket are 5 cm and 15 cm and it is 24 cm high, then its surface area is
   (A) 1815.3 cm^2 (B) 1711.3 cm^2 (C) 2025.3 cm^2 (D) 2360 cm^2

10. If the radii of the ends of a 42 cm high bucket are 16 cm and 11 cm, determine its capacity (take $\pi = \dfrac{22}{7}$)
    (A) 24222 cm^3 (B) 24332 cm^3 (C) 24322 cm^3 (D) none of these