

MENSURATION I & II

- Q.1 One side of a rectangular field is 15mt and one of its diagonals is 17mt. Find the area & parameter of field.
(a)110mt². (b)120mt². (c)125mt². (d)130mt².
- Q.2 Find the cost of carpeting a room 13mt long and 9mt broad with a carpet 75cm wide at rate of Rs.12.40 per mt.
(a)Rs.1924.40 (b)Rs.1834.40 (c)Rs.1935.40 (d)Rs.1934.40
- Q.3 A rectangular grassy plot 110mt by 65mt has a gravel path 2.5mt wide all round it on the inside. Find the cost of gravelling the path at 80paise per mt.
(a)Rs.605 (b)Rs.680 (c)Rs.600 (d)Rs.650
- Q.4 If each side of a square is increased by 25%, find the % change in its area.
(a) 56.25% (b) 52.25% (c) 50.25% (d) 55.25%
- Q.5 Find the area of a triangle whose side measure 13cm, 14cm and 15cm. also find the length of altitude drawn on 14cm. (a) 84cm². (b) 85cm². (c) 80cm². (d) 74cm².
- Q.6 Find the area and length of the altitude of an equilateral triangle of side $3\sqrt{3}$ cm.
(a) 5.5cm. (b) 2.5cm. (c) 3.5cm. (d) 4.5cm.
- Q.7 The length of a rectangle is three times of its width. If the length of the diagonal is $8\sqrt{10}$ cm, then the area & perimeter of the rectangle.
(a) 66cm (b) 64cm (c) 54cm (d) 60cm
- Q.8 The ratio between the length and the breadth of a rectangular park is 3:2. If a man cycling along the boundary of the park at the speed of 12km/hr completes one round in 8 minutes, then find the area of park(in sq. mt.)
(a)153600 mt² (b)153200 mt² (c)153400 mt² (d)153500 mt²
- Q.9 The length of a rectangle is increased by 60%. By what % would the wide have to be decreased so as to maintain the same area? (a) 38.5% (b) 32.5% (c) 27.5% (d) 37.5%
- Q.10 The % increase in the area of rectangle, if each of its sides is increased by 20%.
(a) 49% (b) 44% (c) 45% (d) 42%
- Q.11 A rectangular lawn 55mt by 35mt has two roads each 4mt wide running in the middle of it, one parallel to length and the other parallel to breadth. Find the cost of gravelling the roads at 75paise per sq.mt.
(a) Rs.258 (b) Rs.268 (c) Rs.358 (d) Rs.250
- Q.12 A men walking at the speed of 4kmph crosses a square field diagonally in 3 minutes. Find the area of the field.
(a) 20500mt² (b) 25000mt² (c) 20000mt² (d) 10000mt²
- Q.13 If the side of a square is increased by 5cm, the area increase by 165 cm². Find the original side of square?
(a)14cm. (b)13cm. (c)18cm. (d)16cm.
- Q.14 The sides of a triangle are in the ratio of $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$. If the perimeter is 52cm, then find the length of the smallest side.
(a)14cm. (b)13cm. (c)12cm. (d)16cm.
- Q.15 If the side of an equilateral triangles is decreased by 20%, its area is decreased by,
(a) 36% (b) 40% (c) 35% (d) 42%
- Q.16 The area of a rhombus is 150cm². The length of one its diagonals is 10cm. Find the length of other diagonal & side of rhombus?
(a) 30cm (b)32cm. (c)28cm. (d)26cm.
- Q.17 A circle and a rectangle have the same perimeter. The sides of the rectangle are 18cm and 26cm. What is the area of the circle? (a) 616 cm² (b) 416 cm² (c) 516 cm² (d) 626 cm²
- Q.18 The wheel of an engine $7\frac{1}{2}$ mt. in circumference make 7 revolutions in 9 seconds. The speed of the train in km will be: (a) 21.0km/hr. (b) 32.5km/hr. (c) 22.5km/hr. (d) 23.5km/hr.
- Q.19 If a wire is bent into the shape of a square, then the area of the square is 81sq.cm. When the wire is bent into a semi-circular shape, the area of the semi-circle will be:
(a) 78cm² (b) 87cm² (c) 77cm² (d) 70cm²
- Q.20 A wire can be bent in the from of a circle of radius 56. If it is bent in the form of a square, then its area will be:
(a)7744cm² (b)7733cm² (c)7755cm² (d)6644cm²

- Q.21 Find the volume and surface area of a cuboid 16mt long, 14mt broad and 7mt high.
 (a) 1668mt^3 & 768mt^2 (b) 1650mt^3 & 968mt^2 (c) 1658mt^3 & 868mt^2 (d) 1608mt^3 & 768mt^2
- Q.22 Find the volume, curved surface area and total surface area of cylinder with diameter of base 7cm and height 40cm. (a) 1550cm^3 , 870cm^2 & 955cm^2 (b) 1545cm^3 , 885cm^2 & 957cm^2
 (c) 1640cm^3 , 890cm^2 & 950cm^2 (d) 1540cm^3 , 880cm^2 & 957cm^2
- Q.23 If the capacity of a cylindrical tank is 1848mt^3 and the diameter of its base is 14mt, then find the depth of the tank.
 (a) 12mt (b) 18mt (c) 22mt (d) 15mt
- Q.24 Find the slant height, volume, curved surface area and whole surface area of a cone of radius 21cm & height 28cm. (a) 32cm, 12836cm^3 , 2330cm^2 , 3690cm^2 (b) 32cm, 12930cm^3 , 2312cm^2 , 3695cm^2
 (c) 35cm, 12936cm^3 , 2310cm^2 , 3696cm^2 (d) 33cm, 12935cm^3 , 2210cm^2 , 3796cm^2
- Q.25 Find the length of canvas 1.25mt wide required to build a conical tent of base radius 7mt and height 24mt.
 (a) 442mt (b) 420mt (c) 430mt (d) 440mt
- Q.26 If the radius of a sphere is increased by 50%, find the increase % in the surface area.
 (a) 135% (b) 125% (c) 124% (d) 120%
- Q.27 Find the number of lead balls each 1cm in diameter that can be made from a sphere of diameter 12cm.
 (a) 1728. (b) 1928. (c) 1720. (d) 1828.
- Q.28 The sum of the radius of the base and height of a cylinder is 37mt. If the total surface area of the cylinder be 1628sq.mt , find its volume
 (a) 4620mt^3 (b) 4520mt^3 (c) 4630mt^3 (d) 6620mt^3
- Q.29 A cylindrical tank of diameter 35cm is full of water. If 11 liters of water is drawn off, find how much water level in the tank will drop.
 (a) $13\frac{3}{7}$ cm. (b) $11\frac{3}{7}$ cm. (c) $12\frac{3}{7}$ cm. (d) $11\frac{3}{5}$ cm.
- Q.30 Three cube of iron whose edges are 6cm, 8cm and 10cm respectively are melted and formed into a single cube. Find the edge of the new cube formed.
 (a) 14cm. (b) 13cm. (c) 12cm. (d) 16cm.
- Q.31 The curved surface area of a cylindrical pillar is 264mt^2 and its volume is 924mt^3 . Find the ratio of the of its diameter to its height. (a) 7:5 (b) 8:3 (c) 7:3 (d) 7:2
- Q.32 A cylinder with base radius of 8cm and height of 2cm is melted to form a cone of height 6cm. Find radius of the cone. (a) 8cm. (b) 9cm. (c) 12cm. (d) 16cm.
- Q.33 A cylindrical vessel of radius 4cm contains water. A solid sphere of radius 3cm is lowered into the water until it is completely immersed. Find the water level rise in the vessel.
 (a) $\frac{9}{4}\text{cm}$ (b) $\frac{9}{2}\text{cm}$ (c) $\frac{7}{4}\text{cm}$ (d) $\frac{9}{5}\text{cm}$
- Q.34 A sphere and a cube have equal surface areas. Find the ratio of the volume of the sphere to that of the cube.
 (a) $\sqrt{6} : \sqrt{\pi}$ (b) $\sqrt{7} : \sqrt{\pi}$ (c) $\sqrt{6} : \sqrt{2}$ (d) $\sqrt{5} : \sqrt{\pi}$
- Q.35 The diameter of the iron ball used for the shot-put game is 14cm. It is melted and then a solid cylinder of height $2\frac{1}{3}$ cm is made. What will be the diameter of the base of the cylinder?
 (a) 28cm (b) 25cm. (c) 22cm. (d) 26cm.
- Q.36 A solid cylinder of 16cm diameter and 2cm height is melted and made 12 equal same size spheres. Find the diameter of sphere. (a) 4cm. (b) 4.5cm. (c) 3cm. (d) 5cm.
- Q.37 The diameter of the sphere is 8cm. It is melted and drawn into a wire of diameter 3mm. Find the length of the wire.
 (a) 37.9mt (b) 38.9mt (c) 35.9mt (d) 36.9mt
- Q.38 Water flows at the rate of 10mt per minute from a cylindrical pipe 5mm in diameter. How long will it take to fill up a conical vessel whose diameter at the base is 40cm and depth 24cm?
 (a) 51min. 15sec. (b) 50min. 12sec. (c) 55min. 12sec. (d) 51min. 12sec.
- Q.39 Three cubes of sides 6 cm, 8 cm and 1 cm are melted to form a new cube. The surface area of the new cube is
 (A) 486cm^2 (B) 496cm^2 (C) 586cm^2 (D) 658cm^2
- Q.40 A cylinder has a diameter of 14 cm and the area of its curved surface is 220sq. cm . The volume of the cylinder is
 (A) 620cm^3 (B) 670cm^3 (C) 707cm^3 (D) 770cm^3

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