

QB365

Important Questions - Areas Related to Circles

10th Standard CBSE

Maths

Reg.No. :

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Time : 01:00:00 Hrs

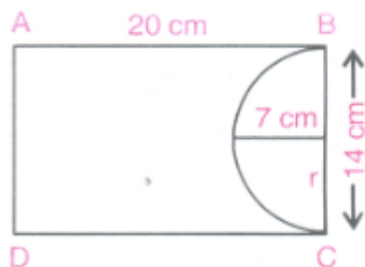
Total Marks : 50

Section - A

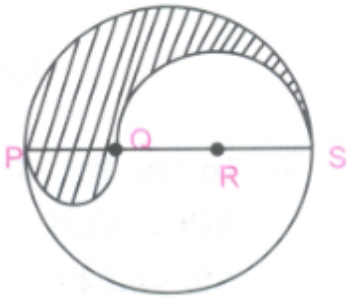
- 1) The boundary of a circle is called its 1
- 2) A wheel has 42 cm diameter, the number of complete revolutions made to cover 792 m is 1
- 3) The length of the minute hand of a clock is 14 cm. Find the area swept out by the minute hand in 1h. 1
- 4) Find the diameter of a circle whose area is equal to the sum of the areas of two circles of radii 40 cm and 9 cm. 1
- 5) If the area of a circle is numerically equal to twice its circumference, then find the diameter of the circle. 1
- 6) What is the perimeter of a sector of a circle whose central angle is 90° and radius is 7 cm ? 1
- 7) If circumference of a circle is 44 cm, then what will be the area of the circle? 1
- 8) A pendulum swings through an angle of 30° and describes an arc 8.8 cm in length. Find the length of pendulum. (use $\pi = \frac{22}{7}$) 1
- 9) If difference between the circumference and the radius of a circle is 37 cm, find the circumference of the circle. 1
[use $\pi = \frac{22}{7}$]
- 10) The outer and inner diameters of a circular ring are 34cm and 32cm respectively, then find the area of the ring. 1

Section - B

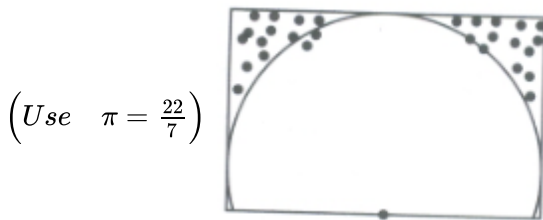
- 11) In a circle of radius 21 cm, an arc subtends an angle of 60° at the centre. Find: 2
 - (i) Length of the arc.
 - (ii) Area of the sector formed by the arc.
 - (iii) Area of the segment formed by the corresponding chord.
- 12) To warn ships for underwater rocks, a lighthouse spreads a red coloured light over a sector of angle 80° to a distance of 16.5 km. Find the area of the sea over which the ships are warned. (Use $\pi = 3.14$) 2
- 13) A paper is in the form of a rectangle ABCD in which AB = 20 cm and BC = 14 cm. A semicircular portion with BC as diameter is cut off. Find the area of the remaining part. [Use $\pi = \frac{22}{7}$] 2



- 14) A field is in the form of a circle. A fence is to be erected around the field. The cost of fencing would be Rs. 2640 at the rate of Rs. 12 per metre. Then the field is to be thoroughly ploughed at the cost of Rs. 0.50 per m^2 . What is the amount required to plough the field? 2
- 15) PQRS is a diameter of a circle of radius 6 cm. The lengths PQ, QR are equal. Semicircles are drawn on PQ and QS as diameters. Find the perimeter of the shaded region. 2

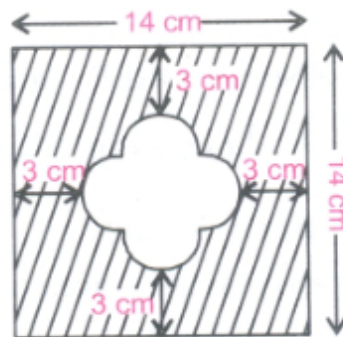


- 16) In the given figure, a semicircle of radius 7 cm is inscribed in a rectangle. Find the area of the shaded region. 2

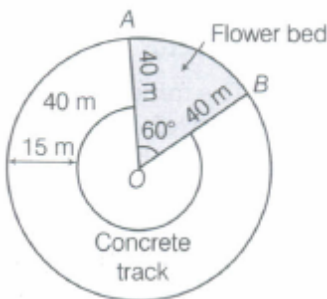


- 17) 2

Find the area of the shaded region given in Fig.



- 18) In figure, AOB is a flower bed in the shape of a sector of a circle of radius 40 m and $\angle AOB = 60^\circ$. Also, a 15 m wide concrete track is made as shown in the figure. Flower bed is made at the rate of Rs.240 per m^2 and rate of making the concrete track is Rs.20 per m^2 . Find the total amount spent for the job. 2



- 19) Find the area of the shaded region in the given figure, if $BC = BD = 8$ cm, $AC = AD = 15$ cm and O is the centre of the circle. [Take, $\pi = 3.14$]. 2

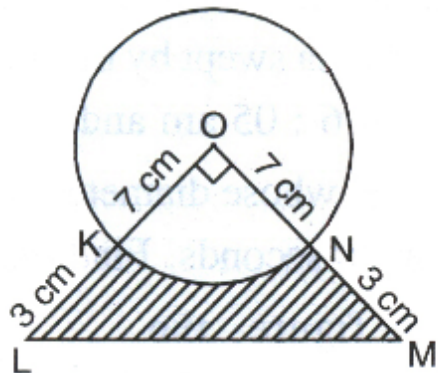
- 20) In Fig. ABCD is a square of side 14 cm. Semi-circles are drawn with each side of square as diameter. Find the area of the shaded region. (Use $\pi = \frac{22}{7}$)

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Section - C

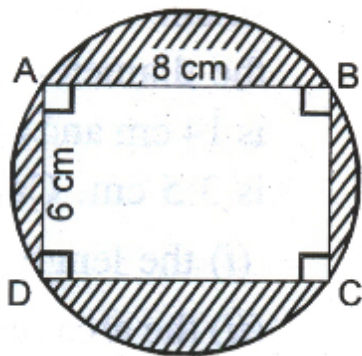
- 21) Three identical memento is made by a school to award three students for three values : Hardwork, Knowledge and Tolerance. If each memento is made as shown in the figure and its base KLMN is silver plated from the front side at the rate of Rs. 25 per cm^2 . Find the total cost of the silver plating.

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- 22) In the adjoining figure, find the area of the shaded region. [Use $\pi = 3.14$]

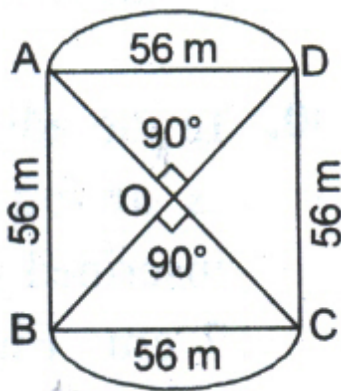
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- 23) In the given figure, two circular flower beds have been shown in two sides of a square lawn in ABCD of side 56 m. If the centre of each circular flower bed is the point of intersection O of the diagonals of the sum of the areas

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of the lawn and the flower beds.



- 24) A farmer has field of length 20 m and breadth 14 m. By the farmer a well of diameter 7 m is dug 10 m deep for villagers. The earth taken out is spread in the field. Find the level rise in the field. Write the value depicted.

5
