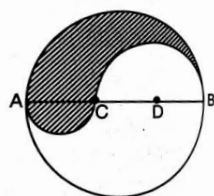
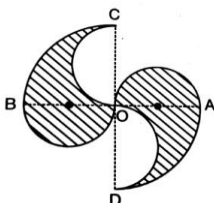


Mathematics Assignment (Class-X)

Chapter-12 Areas Related to Circles

	1 MARKER QUESTIONS
1	The area of the ring whose outer and inner radii are respectively 23 cm and 12 cm is: (a) 121 sq. cm (b) 1056 sq.cm (c) 1210 sq. cm (d) 13850 sq. cm
2	The diameter of a wheel is 1.26 m. the distance covered ny it in 500 complete revolutions is: (a) 1980 sq. m (b) 1980 m (c) 2530 m (d) 2880 m
3	In a circle with centre O, the area of a sector with central angle 'x' is $\frac{5}{18}$ of the area of the circle. The value of x = _____.
4	If the perimeter of a semi-circular protractor is 54 cm, then its diameter is _____.
5	A wire is looped in the form of a circle of radius 28 cm. it is rebent into a square form. Find the length of the side of the square.
6	What is the ratio of a sector of an angle 45° in a circle to that of circle.
7	If an arc forms 90° at the centre O of the circle, then find the ratio of its length to the circumference of the circle.
8	An archery target has three consecutive circular regions. The diameter of the regions are in the ratio 1 : 2 : 3. Find the ratio of their areas.
	2 MARKER QUESTIONS
9	Find the length of an arc of a sector of a circle of radius 14 cm of central angle 90° .
10	The length of a minute hand of a wall clock is 7 cm. what is the area swept by it in 15 mins?
11	The length of a minute hand of a wall clock is 14 cm. What is the area swept by it in 45 minutes?
12	A bicycle wheel makes 5000 revolutions in moving 11 km. Find the diameter of the wheel.
13	The sum of the circumferences of two circles is 110 cm. if the diameter of one of them is 28 cm, then what is the diameter of the other circle?
14	The radii of two circles are 15 cm and 5 cm respectively. Find the radius of the circle which has circumference equal to the sum of the circumferences of the two circles.
15	The sum of diameter of two circles is 2.8 m and the difference of their circumferences is 0.88 m. Find the radii of the two circles.
16	Find the area of a sector of a circle of radius 7.5 cm, if the length of the arc is 22 cm.

	3 MARKER QUESTIONS
17	Find the area of the sector of the circle with radius 4 cm and of angle 30° . Also find the area of the corresponding major sector. (Take $\pi = 3.14$)
18	Find the radius of a circle if a 40° arc has length 4π cm. Hence find the area of the sector formed by the arc.
19	A chord of a circle of radius 12 cm subtends an angle of 120° at the centre. Find the area of the corresponding segment of the circle. Take $\pi = 3.14$ and $\sqrt{3} = 1.73$
20	The short and long hands of a clock are 4cm and 6cm long respectively. Find the sum of the distances travelled by their tips in two days. (use $\pi = 3.14$)
21	Four equal circles are described about four corners of a square so that each touch two of the others. Find the area of the region of the square that is not enclosed by the circles, each side of the square measuring 14cm. (take $\pi = 3.14$)
22	A racetrack is in the form of a ring whose inner circumference is 440 m and the outer circumference is 506 m. Find the width of the track and also the area.
	4 MARKER QUESTIONS
23	In a circle of radius 21 cm, and arc subtends an angle of 60° at the centre. Find: (a) the length of the arc. (b) the area of the sector formed by the arc (c) area of the segment formed by the corresponding chord.
24	AB is a diameter of a circle of radius 21 cm. the length AC, CD and DB are equal. Semicircles are drawn on AC and CB as diameters. Find: the perimeter and the area of the shaded region.
	
25	A rectangular park is 28 m by 14 m. It is surrounded by semicircular flower beds all around. Determine the cost of leveling the beds at the rate of Rs 15 per sq m.
	HOTS
26	The boundary of the shaded portion in the adjoining figure consists of four half-circles and two quarter-circles. Find the length of the boundary and the area of the shaded portion, if $OA = OB = OC = OD = 14$ cm.
	
27	The area of a circular ring enclosed between two concentric circles is 286 sq cm. find the radii of the two circles, given that their difference is 7 cm.
28	All the vertices of a rhombus lie on a circle. Find the area of the rhombus, if area of the circle is 1256 sq cm. (use $\pi = 3.14$)
29	An equilateral triangle is inscribed in a circle of radius r cm. Show that the area of the portion of the circle not included in the triangle is $r^2 \left(\pi - \frac{3\sqrt{3}}{4} \right)$.

30	In figure, ΔABC is right angled at C. Find the area of the shaded region. 