



WORKSHEET OF CHAPTER 10 (AREA RELATED TO CIRCLE)

Part 1(1 mark type questions)

Q 1. What is the area of a semi - circle of diameter 'd' ?

- (a) $\frac{1}{16}\pi d^2$ (b) $\frac{1}{4}\pi d^2$ (c) $\frac{1}{8}\pi d^2$ (d) $\frac{1}{2}\pi d^2$

Q 2. The area swept by 7 cm long minute hand of a clock in 10 minutes is

- (a) 77 cm² (b) $12\frac{5}{6}$ cm² (c) $7\frac{1}{12}$ cm² (d) $25\frac{2}{3}$ cm²

Q 3. Find the area of a segment of a circle of radius 21cm, if the angle made by the arc of the segment has a measure of 60°

- (a) 45.27cm² (b) 40.27cm² (c).40.8cm² (d). None of these

Q 4. The length of an arc of a sector of radius R making a central angle x is ?

- (a) $\frac{x}{180^\circ} \times 2\pi R$ (b) $\frac{x}{360^\circ} \times 2\pi R$ (c). $\frac{x}{180^\circ} \times \pi R^2$ (d). None of these

Q 5. If the area of a sector of a circle is $\frac{5}{18}$ th of the area of the circle, then the sector angle is equal to

- (a) 110° (b) 100° (c) 120° (d) 105°

Q 6. A piece of wire 20 cm long is bent into the form of an arc of a circle subtending an angle of 60° at its centre. Find the radius of the circle

- (a) $\frac{40}{\pi}$ (b) $\frac{60}{\pi}$ (c) $\frac{30}{\pi}$ (d) $\frac{20}{\pi}$

Part 2 (2 marks type questions)

Q 7. A piece of wire 22 cm long is bent into the form of an arc of a circle subtending an angle of 60° at its centre. Find the radius of the circle ?

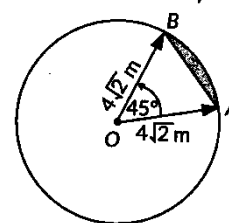
Q8. Find the length of the arc of a circle of diameter 42 cm which subtends an angle of 60° at the centre.

Q9. The length of the minute hand of a clock is 6cm.find the area swept by it moves from 7:05 p. m to 7:40 p. m.

Q10. If the chord of a circle of radius 10 cm subtends an angle 30 degree at the centre find the area of corresponding segment of the circle. (Use $\pi = 3.14$)

Q11. In the given figure, a needle oves from position OA to OB around a circle with centre O and radius $4\sqrt{2}$ m and $\angle BOA = 45^\circ$ is made. Find the area of the shaded region.

(use $\sqrt{2} = 1.41$)

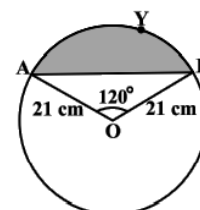


Q12. The length of the minute hand of a clock is 14 cm. find the area swept by the minute hand from 10 a.m. to 10.35a.m.

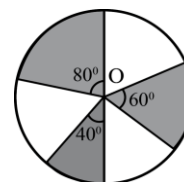
Part 3 (3/4/5 marks type questions)

Q13. A car has two wipers which do not overlap. Each wiper has a blade of length 21 cm sweeping through an angle of 120°. Find the total area cleaned at each sweep of the blades?

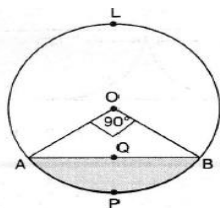
Q14. Find the area of the segment AYB of circle, if radius of the circle centered at O is 21 cm and $\angle AOB = 120^\circ$



Q 15. In figure, three sectors of a circle of radius 7 cm, making angles of 60° , 80° and 40° at the center are shaded. Find the area of the shaded region.

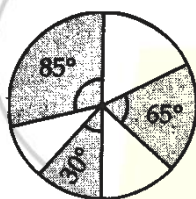


Q 16. In the given figure, a chord AB of the circle with centre O and radius 10 cm, that subtends a right angle at the centre of the circle. Find the area of the minor segment AQB. Hence find the area of major segment ALBQA. (Use $\pi = 3.14$)

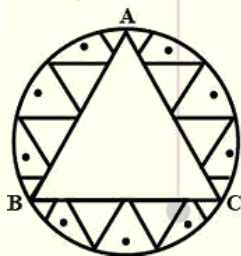


Q17. Find the area of minor segment of a circle of radius 14cm when it's centre angle is 60° . Also find the area of corresponding major segment.

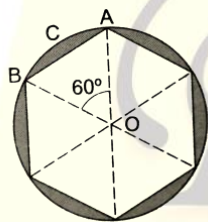
Q18. In figure, three sectors of a circle of radius 5 cm, making angles of 30° , 85° and 65° at the center are shaded. Find the area of the shaded region.



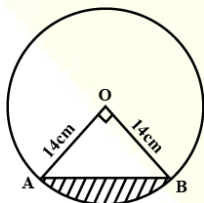
Q19. In a circular table cover of radius 70 cm, a design is formed leaving an equilateral triangle ABC in the middle as shown in Fig Find the area of the design.



Q20. A round table cover has six equal designs, as shown in the figure. If the radius of the cover is 35 cm find the cost of making the designs. [Use $\sqrt{3} = 1.7$] and $(\pi = 3.14)$



Q21. Find the area of the segment of a circle of radius 14cm if the length of the corresponding arc APB is 22 cm.



Q 22. In a circle of radius 7 cm, a square ABCD is inscribed. Find the area of the shaded region.

