RK VISION ACADEMY

NEET | IIT – JEE | FOUNDATION

CBSE PRACTICE PAPER(2024)

(Mathematics)

Grade : X   **Marks: 40**
marks
Chapter:AREA RELATED TO CIRCLES   SET-2   **Time: 90 minutes**

SECTION A
(This section comprises of Multiple-choice questions (MCQ) of 1 mark each.)

1. The area of a circle whose circumference is 52.8 cm is

    (a) 221.76 cm²   (b) 224.75 cm²   (c) 220.76 cm²   (d) None of these

2. If the perimeter of a circle is equal to that of a square, then the ratio of their areas is

    (a) 22 : 7   (b) 14 : 11   (c) 7 : 22   (d) 11 : 14

3. The minute hand of a clock is 10 cm long. The area swept by the minute hand between 8:00 am to 8:25 am, is

    (a) 130.95 cm²   (b) 130 cm²   (c) 131.95 cm²   (d) 131 cm²

4. If the circumference of a circle exceeds it diameter by 30 cm, then the radius of the circle is

    (a) 7 cm   (b) 8 cm   (c) 4 cm   (d) 6 cm

5. The area of a quadrant of circle whose circumference is 12 cm, is

    (a) 102.34 cm²   (b) 95.15 cm²   (c) 34 cm²   (d) 45.81 cm²

6. The area of the circle is 154 cm². The radius of the circle is

    (a) 7 cm   (b) 14 cm   (c) 3.5 cm   (d) 17.5 cm

7. The radius of a circle whose circumference is equal to the sum of the circumferences of the two circles of diameters 36cm and 20 cm is

    (A) 56 cm   (B) 42 cm   (C) 28 cm   (D) 16 cm

8. The diameter of a circle whose area is equal to the sum of the areas of the two circles of radii 24 cm and 7 cm is

    (A) 31 cm   (B) 25 cm   (C) 62 cm   (D) 50 cm

9. The area of the circle that can be inscribed in a square of side 6 cm is

    (A) 36π cm²   (B) 18π cm²   (C) 12π cm²   (D) 9π cm²

10. Assertion (A) If the circumference of a circle is 176 cm, then its radius is 28 cm.
    Reason (R) Circumference $= 2\pi \times$ radius [1]

    (a) Both Assertion   (b) Both Assertion (A)   (c) Assertion (A) is true   (d) Assertion (A) is false

(A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)	and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A)	but Reason (R) is false	but Reason (R) is true

SECTION B
(This section comprises of very short answer type-questions (VSA) of 2 marks each)

11. In the given figure, three sectors of a circle of radius 7 cm, making angles of 60°, 80°, 40° at the centre are shown. Find the area (in cm2) of the shaded region.
12. The length of minute hand of a clock is 14 cm. Then, find the area swept by the minute hand in one minute.
13. In a circle of radius 21 cm, an arc subtends an angle of 60° at the centre. Find the area of the sector.

SECTION C
(This section comprises of short answer type questions (SA) of 3 marks each)

14. What is the diameter of a circle whose area is equal to the sum of the areas of two circles of radius 40 cm and 9 cm?
15. A chord of a circle of radius 10 cm subtends a right angle at the centre. Find the area of minor segment (use $\pi = 3.14$)
16. Find the area of a sector of circle of radius 21 cm and central angle 120°.

SECTION D
(This section comprises of long answer-type questions (LA) of 5 marks each)

17. Find the difference of the areas of a sector of angle 120° and its corresponding major sector of a circle of radius 21 cm.

18. All the vertices of a rhombus lie on a circle. Find the area of the rhombus, if area of the circle is 1256 cm^2

19. Area of a sector of a circle of radius 36 cm is 54 π cm^2 . Find the length of the corresponding arc of the sector.