

MULTIPLE CHOICE QUESTIONS

Choose and write the correct option in the following questions.

1. The perimeter of a circle is equal to that of a square, then the ratio of their areas is [NCERT Exemplar]

(a) $22 : 7$

(b) 14 : 11

(c) 7 : 22

(d) 11 : 14

- 2. Area of the largest triangle that can be inscribed in a semi-circle of radius r units is**

[NCERT Exemplar]

(a) r^2 sq. units

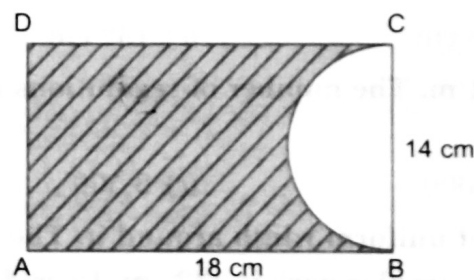
(b) $\frac{1}{2}r^2$ sq. units

(c) $2r^2$ sq. units

(d) $\sqrt{2} r^2$ sq. units

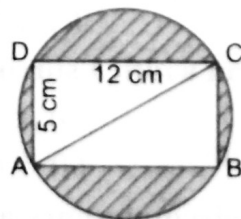
3. If the circumference of a circle and the perimeter of a square are equal, then [NCERT Exemplar]
 - (a) Area of the circle = Area of the square
 - (b) Area of the circle > Area of the square
 - (c) Area of the circle < Area of the square
 - (d) Nothing definite can be said about the relation between the areas of the circle and square.
4. If the sum of the circumferences of two circles with radii R_1 and R_2 is equal to the circumference of a circle of radius R , then [NCERT Exemplar]
 - (a) $R_1 + R_2 = R$
 - (b) $R_1 + R_2 > R$
 - (c) $R_1 + R_2 < R$
 - (d) None of these
5. If the area of a circle is 154 cm^2 , then its perimeter is [NCERT Exemplar]
 - (a) 11 cm
 - (b) 22 cm
 - (c) 44 cm
 - (d) 55 cm
6. It is proposed to build a single circular park equal in area to the sum of areas of two circular parks of diameters 16 m and 12 m in a locality. The radius of the new park would be [NCERT Exemplar]
 - (a) 10 m
 - (b) 15 m
 - (c) 20 m
 - (d) 24 m
7. The area of the circle that can be inscribed in a square of side 6 cm is [NCERT Exemplar]
 - (a) $36 \pi \text{ cm}^2$
 - (b) $18 \pi \text{ cm}^2$
 - (c) $12 \pi \text{ cm}^2$
 - (d) $9 \pi \text{ cm}^2$
8. The area of the square that can be inscribed in a circle of radius 8 cm is [NCERT Exemplar]
 - (a) 256 cm^2
 - (b) 128 cm^2
 - (c) $64\sqrt{2} \text{ cm}^2$
 - (d) 64 cm^2
9. The radius of a circle whose circumference is equal to the sum of the circumferences of the two circles of diameters 36 cm and 20 cm is [NCERT Exemplar]
 - (a) 56 cm
 - (b) 42 cm
 - (c) 28 cm
 - (d) 16 cm
10. 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 [NCERT Exemplar]
 - (a) 31 cm
 - (b) 25 cm
 - (c) 62 cm
 - (d) 50 cm
11. If the area of circle is 1386 cm^2 , then its circumference is
 - (a) 66 cm
 - (b) 88 cm
 - (c) 132 cm
 - (d) 264 cm
12. The diameter of a wheel is 1 m. The number of revolutions it will make to travel a distance of 22 km will be
 - (a) 2,800
 - (b) 4,000
 - (c) 5,500
 - (d) 7,000
13. A circular park has a path of uniform width around it. The difference between the outer and inner circumferences of the circular park is 132 cm. Its width is
 - (a) 20 cm
 - (b) 21 cm
 - (c) 22 cm
 - (d) 24 cm
14. The ratio of the areas of a circle and an equilateral triangle whose diameter and a side are respectively equal is
 - (a) $\pi : \sqrt{2}$
 - (b) $\pi : \sqrt{3}$
 - (c) $\sqrt{3} : \pi$
 - (d) $\sqrt{2} : \pi$
15. The area of a circular path of uniform width b surrounding a circular region of radius r is
 - (a) $\pi(2r + b)r$ sq. units
 - (b) $\pi(2r + b)b$ sq. units
 - (c) $\pi(b + r)r$ sq. units
 - (d) $\pi(b + r)b$ sq. units
16. The area of a circle whose area and circumference are numerically equal is
 - (a) 2π sq. units
 - (b) 4π sq. units
 - (c) 6π sq. units
 - (d) 8π sq. units

17. The area of a quadrant of a circle whose circumference is 616 cm will be
 (a) 7546 cm^2 (b) 7500 cm^2 (c) 7456 cm^2 (d) 7564 cm^2
18. The circumference of two circles are in the ratio 2 : 3. The ratio of their areas is
 (a) 2 : 3 (b) 4 : 9 (c) 9 : 4 (d) None of these
19. If the perimeter of a semicircular protractor is 36 cm; its diameter is
 (a) 14 cm (b) 16 cm (c) 18 cm (d) 12 cm
20. The area of a sector of a circle with radius 14 cm and central angle 45° is
 (a) 76 cm^2 (b) 77 cm^2 (c) 66 cm^2 (d) 55 cm^2
21. If θ is the angle (in degrees) of a sector of a circle of radius r , then area of the sector is
 (a) $\frac{\pi r^2 \theta}{360^\circ}$ (b) $\frac{\pi r^2 \theta}{180^\circ}$ (c) $\frac{2\pi r \theta}{360^\circ}$ (d) $\frac{2\pi r \theta}{180^\circ}$
22. A wire can be bent in the form of a circle of radius 35 cm. If it is bent in the form of a square, then its area will be
 (a) 3025 cm^2 (b) $\frac{3025}{2} \text{ cm}^2$ (c) 1225 cm^2 (d) 2450 cm^2
23. The difference between the circumference and radius of a circle is 37 cm. The area of circle is
 (a) 111 cm^2 (b) 184 cm^2 (c) 154 cm^2 (d) 259 cm^2
24. On increasing the distance of circle by 40%, its area will be increased by
 (a) 40% (b) 80% (c) 96% (d) none of them
25. The area of the square is same as the area of circle. Then their perimeter are in the ratio
 (a) 1 : 1 (b) $\sqrt{\pi} : 2$ (c) $2 : \pi$ (d) none of them
26. A paper is in the form of a rectangle $ABCD$ in which $AB = 18 \text{ cm}$ and $BC = 14 \text{ cm}$. A semicircular portion with BC as diameter is cut off. The area of the remaining paper is



- (a) 175 cm^2 (b) 165 cm^2 (c) 145 cm^2 (d) none of them

27. The area of the shaded region in the given figure is (Take $\pi = 3.14$).



- (a) 75 cm^2 (b) 73 cm^2 (c) 70 cm^2 (d) none of them