Areas Related to Circles

Question 1.
The circumference of a circle exceeds its diameter by 120cm, then its radius is
(a) 56cm
(b) 14cm
(c) 42cm
(d) 28cm

Answer: (d) 28cm

Question 2.
The area of a circle is 2464 sq. cm, then its diameter is given by
(a) 7cm
(b) 14cm
(c) 28cm
(d) 56cm

Answer: (d) 56cm

Question 3.
The diameter of a wheel is 1.26 m. The distance travelled in 500 revolutions is
(a) 2670 m
(b) 2880 m
(c) 1980 m
(d) 1596 m

Answer: (c) 1980 m

Question 4.
The area of a sector of a circle with radius 21cm and sector angle 120° is
(a) 462 sq. cm
(b) 288 sq. cm

(c) 156 sq. cm
(d) 426 sq. cm

Answer: (a) 462 sq. cm

Question 5.
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) 1 : 22
(d) 11 : 14

Answer: (b) 14 : 11

Question 6.
The ratio of the areas of the incircle and circumcircle of a square is
(a) 1 : 2
(b) 1 : 3
(c) 1 : 4
(d) 1 : $\sqrt{2}$

Answer: (a) 1 : 2

Question 7.
If the area of a circle is numerically equal to twice its circumference, then the diameter of the circle is:
(a) 4 units
(b) n units
(c) 8 units
(d) 2 units

Answer: (c) 8 units

Question 8.
The ratio of area of two circles whose ratio of circumference is 3:1 will be
(a) 3 : 1
(b) 1 : 3
(c) 1 : 9
(d) 9 : 1

Answer: (d) 9 : 1

Question 9.
If the area of a circle is 154 cm^2, then its perimeter is
(a) 11cm
(b) 22 cm
(c) 44 cm
(d) 55 cm

Answer: (c) 44 cm

Question 10.
The area of a sector of a circle bounded by an arc of length 5π cm is equal to 20π cm^2, then its radius is
(a) 12 cm
(b) 16 cm
(c) 8 cm
(d) 10 cm

Answer: (c) 8 cm

Question 11.
The area of a circle whose circumference is 22 cm, is
(a) π cm^2
(b) 38.5 cm^2
(c) 22 cm^2
(d) 77 cm^2

Answer: (b) 38.5 cm^2

Question 12.
If the radius of a circle is increased by 100%, then its area is increased by
(a) 100%
(b) 300%
(c) 200%
(d) 400%

Answer: (b) 300%

Question 13.
The perimeter of a semicircular protractor whose radius is 7cm is
(a) 18cm
(b) 27cm
(c) 36cm
(d) 72cm

Answer: (c) 36cm

Question 14.
If 'r' is the radius of a circle, then its perimeter is given by
(a) πr
(b) 2πr
(c) 2πd
(d) none of these

Answer: (b) 2πr

Question 15.
The area of the circle that can be inscribed in a square of side 10cm is
(a) 25 sq.cm
(b) 10π sq.cm
(c) 125π sq.cm
(d) 20π sq.cm

Answer: (c) 125π sq.cm

Question 16.
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
(a) 10 m
(b) 15 m
(c) 20 m
(d) 24 m

Answer: (a) 10 m

Question 17.
The distance covered by a circular wheel of diameter 'd' in 100 revolutions is

(a) 100π
(b) 100d
(c) πd
(d) 100πd

Answer: (d) 100πd

Question 18.
The diameter of a wheel is 1.26 m. The distance travelled in 500 revolutions is
(a) 2670 m
(b) 2880 m
(c) 1980 m
(d) 1596 m

Answer: (c) 1980 m

Question 19.
The area of the square that can be inscribed in a circle of radius 12 cm is
(a) 288 sq. cm
(b) 576 sq. cm
(c) 144 sq.cm
(d) 500 sq. cm

Answer: (a) 288 sq. cm

Question 20.
The perimeter (in cm) of a square circumscribing a circle of radius a cm, is
(a) 8 a
(b) 4 a
(c) 2 a
(d) 16

Answer: (a) 8 a

Question 21.
The radii of two circles are 4 cm and 3 cm respectively. The diameter of the circle having area equal to the sum of the areas of the two circles (in cm) is:
(a) 5
(b) 7

(c) 10
(d) 14

Answer: (c) 10

Question 22.
The radii of two circles are 19 cm and 9 cm respectively. The radius of the circle which has circumference equal to the sum of the circumference of two circles is
(a) 35 cm
(b) 10 cm
(c) 21 cm
(d) 28 cm

Answer: (d) 28 cm
