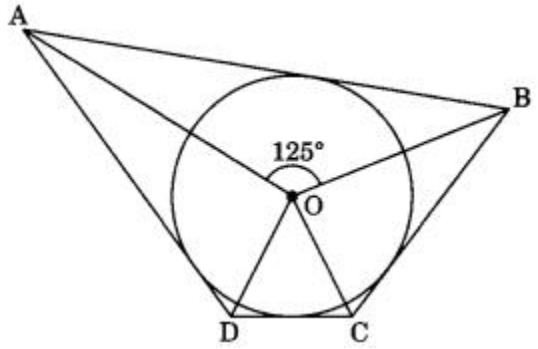
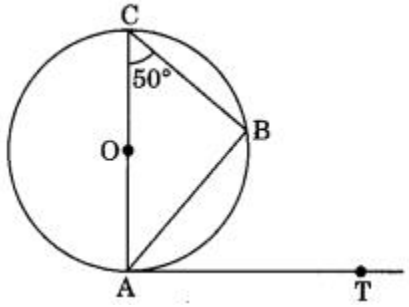
Question 1.
If radii of two concentric circles are 4 cm and 5 cm, then the length of each chord of one circle which is tangent to the other circle is
(a) 3 cm
(b) 6 cm
(c) 9 cm
(d) 1 cm

Question 2.
In Fig., if ∠AOB = 125°, then ∠COD is equal to



(a) 62.5°
(b) 45°
(c) 35°
(d) 55°

Question 3.
If Fig., AB is a chord of the circle and AOC is its diameter such that ∠ACB = 50°. If AT is the tangent to the circle at the point A, the ∠BAT is equal to

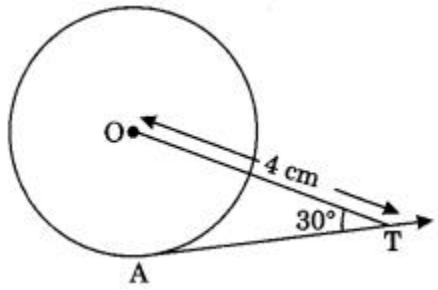


(a) 65°
(b) 60°
(c) 50°
(d) 40°

Question 4.
From a point P which is at a distance of 13 cm from the point O of a circle of radius 5 cm, the pair of tangents PQ and PR to the circle are drawn. Then the area of the quadrilateral PQOR is
(a) 60 cm²
(b) 65 cm²
(c) 30 cm²
(d) 32.5 cm²

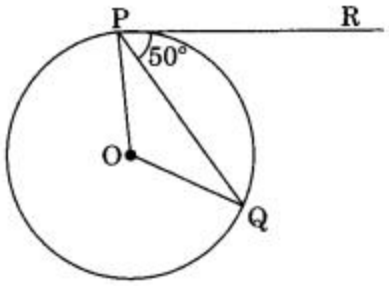
Question 5.
At one end A of a diameter AB of a circle of radius 5 cm, tangent XAY is drawn to the circle. The length of the chord CD parallel to XY and at a distance 8 cm from A is
(a) 4 cm
(b) 5 cm
(c) 6 cm
(d) 8 cm

Question 6.
In Fig., AT is a tangent to the circle with centre O such that OT = 4 cm and ∠OTA = 30°. Then AT is equal to



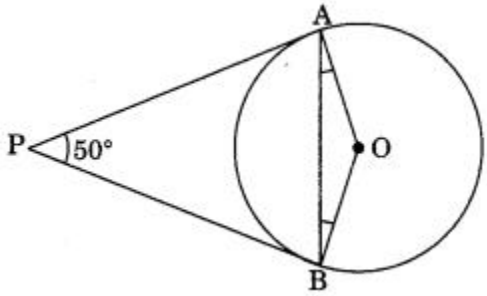
(a) 4 cm
(b) 2 cm
(c) 2√3 cm
(d) 4√3 cm

Question 7.
In Fig., if O is the centre of a circle PQ is a chord and the tangent PR at P makes an angle of 50° with PQ, then ∠POQ is equal to



(a) 100°
(b) 80°
(c) 90°
(d) 75°

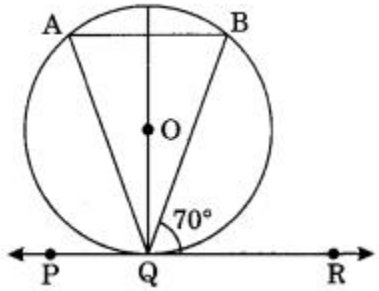
Question 8.
In Fig., if PA and PB are tangents to the circle with centre 0 such that ∠APB = 50°, then ∠AOB is equal to



(a) 25°
(b) 130°
(c) 100°
(d) 50°

Question 9.
If two tangents inclined at an angle 60° are drawn to a circle of radius 3 cm the length of each tangent is equal to
(a) 32√3 cm
(b) 6 cm
(c) 3 cm
(d) 3√3 cm

Question 10.
In Fig., if PQR is the tangent to a circle at Q whose centre is O, AB is a chord parallel to PR and ∠BQR = 70°, then ∠AQB is equal to



(a) 20°
(b) 40°
(c) 35°
(d) 45°

1. A ———- is a collection of all points in a plane which are at a constant distance (radius) from a fixed point (centre).

A. Circle
B. Oval
C. Parallelogram

2. A ——– to a circle is a line that intersects the circle at only one point.

A. Tangent
B. Secant
C. Segment

3. There is only ———- tangent at a point of the circle.

A. One
B. Two
C. Three

4. The common point of the tangent and the circle is called the ———————-

A. point of intersection
B. point of contact
C. point of view

5. The tangent at any point of a circle is ——— to the radius through the point of contact.

A. Parallel
B. Perpendicular
C. Equal

6. The lengths of tangents drawn from an external point to a circle are ———

A. Equal
B. Greater
C. Smaller

7. How many tangents can a circle have?

A. One
B. Two
C. Infinite

8. A tangent to a circle intersects it in —— points.

A. One
B. Two
C. Infinite

9. A line intersecting a circle in two points is called a ————-

A. Tangent
B. Secant
C. Segment

10. A circle can have ————–– parallel tangents at the most.

A. One
B. Two
C. Three

11. The tangents drawn at the extremities of the diameter of a circle are ——

A. parallel
B. perpendicular
C. Equal

12. Number of tangents to a circle which are parallel to a secant is ————-

A. One
B. Two
C. Infinite

13. The distance between two parallel tangents of a circle of radius 5 cm is ————––

A. 5 cm
B. 10 cm
C. 15cm

14. ——— is a line through point of contact and passing through centre of circle.

A. Tangent
B. Chord
C. Normal

15. Number of tangents to a circle which are parallel to a secant is ————-

A. One
B. Two
C. Three

ANSWERS:

1. Circle
2. Tangent
3. One
4. Point of contact
5. Perpendicular
6. Equal
7. Infinite
8. One
9. Secant
10. Two
11. Parallel
12. Two
13. 10 cm
14. Normal
15. Two

1. A tangent is drawn from a point at a distance of 17 cm of circle C(0, r) of radius 8 cm. The length of its tangent is

(a) 5 cm

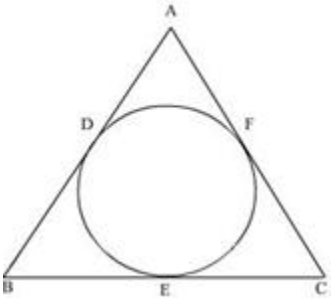
(b) 9 cm

(c) 15 cm

(d) 23 cm

► (c) 15 cm

2. A circle is inscribed in a ΔABC having AB = 10cm, BC = 12cm and CA = 8cm and touching these sides at D, E, F respectively. The lengths of AD, BE and CF will be



(a) AD = 4cm, BE = 6cm, CF = 8cm

(b) AD = 5cm, BE = 9cm, CF = 4cm

(c) AD = 3cm, BE = 7cm, CF = 5cm

(d) AD = 2cm, BE = 6cm, CF = 7cm

► (c) AD = 3cm, BE = 7cm, CF = 5cm

3. The length of tangents drawn from an external point to the circle

(a) are equal

(b) are not equal

(c) sometimes are equal

(d) are not defined

► (a) are equal

4. The tangents drawn at the extremities of the diameter of a circle are

(a) perpendicular

(b) parallel

(c) equal

(d) none of these

► (b) parallel

5. The length of a tangent drawn from a point at a distance of 10 cm of circle is 8 cm. The radius of the circle is

(a) 4 cm

(b) 5 cm

(c) 6 cm

(d) 7 cm

► (c) 6 cm

6. At point A on a diameter AB of a circle of radius 10 cm, tangent XAY is drawn to the circle. The length of the chord CD parallel to XY at a distance 16 cm from A is

(a) 8 cm

(b) 10 cm

(c) 16 cm

(d) 18 cm

► (c) 16 cm

7. Segment joining the points of contact of two parallel tangents

(a) may or may not pass through the centre.

(b) will pass through the centre.

(c) will not pass through the centre.

(d) none of these

► (b) will pass through the centre.

8. From a point P which is at a distance of 13 cm from the centre O of a circle of radius 5 cm, the pair of tangents PQ and PR to the circle are drawn. Then the area of the quadrilateral PQOR is

(a) 60 cm2

(b) 65 cm2

(c) 30 cm2

(d) 32.5 cm2

► (a) 60 cm2

9. If tangents PA and PB from a point P to a circle with centre O are inclined to each other at an angle of 80° then ∠POA is equal to

(a) 50°

(b) 60°

(c) 70°

(d) 80°

► (a) 50°

10. A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre O at a point Q

(a) √119 cm

(b) 13 cm

(c) 12 cm

(d) 8.5 cm

► (a) √119 cm

12. From a point P which is at a distance of 13 cm from the centre O of a circle of radius 5 cm, the pair of tangents PQ and PR to the circle are drawn. Then the area of the quadrilateral PQOR is

(a) 60 cm2

(b) 65 cm2

(c) 30 cm2

(d) 32.5 cm2

► (a) 60 cm2

13. A line through point of contact and passing through centre of circle is known as
(a) tangent
(b) chord
(c) normal
(d) segment
► (c) normal

14. In a circle of radius 7cm, tangent PT is drawn from point P such that PT = 24cm. If O is the centre of the circle, then the length of OP is:

(a) 30cm

(b) 31cm

(c) 28cm

(d) 25cm

► (d) 25cm

15. Two parallel lines touch the circle at points A and B respectively. If area of the circle is 25 n cm2, then AB is equal to

(a) 5 cm

(b) 8 cm

(c) 10 cm

(d) 25 cm

► (c) 10 cm

16. The maximum number of common tangents that can be drawn to two circles intersecting at two distinct point is

(a) 2

(b) 4

(c) 1

(d) 3

► (a) 2

17. Tangents from an external point to a circle are

(a) equal

(b) not equal

(c) parallel

(d) perpendicular

► (a) equal

18. Number of tangents drawn at a point of the , circle is/are

(a) one

(b) two

(c) none

(d) infinite

► (a) one

19. If TP and TQ are two tangents to a circle with centre O so that ∠POQ = 110°, then, ∠PTQ is equal to

(a) 60°

(b) 70°

(c) 80°

(d) 90°

► (b) 70°

20. PQ is a tangent drawn from a point P to a circle with centre O and QOR is a diameter of the circle such that ∠POR = 120°, then ∠OPQ is

(a) 60°

(b) 45°

(c) 30°

(d) 90°

► (c) 30°

21. Two circle touch each other externally at C and AB is a common tangent to the circles. Then, ∠ACB =

(a) 60°

(b) 45°

(c) 30°

(d) 90°

► (d) 90°

22. If four sides of a quadrilateral ABCD are tangential to a circle, then

(a) AC + AD = BD + CD

(b) AB + CD = BC + AD

(c) AB + CD = AC + BC

(d) AC + AD = BC + DB

► (b) AB + CD = BC + AD