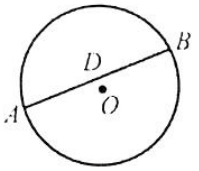
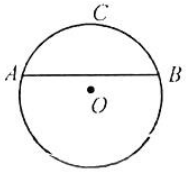
MISCELLANEOUS EXERCISE – 9

Q.1 Four possible answers are given for the following questions.

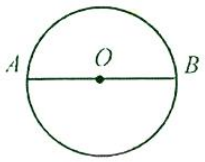
1. In the circular figure. ADB is called
   (a) an arc
   (b) a secant
   (c) a chord
   (d) a diameter



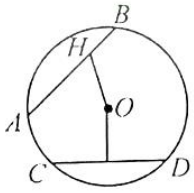
2. In the circular figure, $\overset{\frown}{ABC}$ is called
   (a) an arc
   (b) a secant
   (c) a chord
   (d) a diameter



3. In the circular figure, AOB is called
   (a) an arc
   (b) secant
   (c) a chord
   (d) diameter



4. In a circular figure, two chords $\overline{AB}$ and $\overline{CD}$ are equidistant from the centre. They will be
   (a) parallel
   (b) non congruent
   (c) congruent
   (d) perpendicular



5. Radii of a circle are
   (a) all equal
   (b) double of the diameter
   (c) all unequal
   (d) half of any chord

6. A chord Passing through the centre of a circle is called
   (a) radius
   (b) diameter
   (c) circumference
   (d) secant

7. Right bisector of the chord of a circle always passes through the
   (a) radius (b) circumference
   (c) centre (d) diameter

8. The circular region bounded by two radii and the corresponding arc is called
   (a) circumference of a circle
   (b) sector of a circle
   (c) diameter of a circle
   (d) segment of a circle

9. The distance of any point of the circle to its centre is called
   (a) radius (b) diameter
   (c) a chord (d) an arc

10. Line segment joining any point of the circle to the centre is called
    (a) circumference
    (b) diameter
    (c) radial segment
    (d) perimeter

11. Locus of a point in a plane equidistant from a fixed point is called
    (a) radius
    (b) circle
    (c) circumference
    (d) diameter

12. The symbol for a triangle is denoted by
    (a) $\angle$ (b) Δ
    (c) $\perp$ (d) $\odot$

13. A complete circle is divided into
    (a) 90 degree (b) 180 degree
    (c) 270 degree (d) 360 degree

14. Through how many non-collinear points, a circle can pass?
    (a) one (b) two
    (c) three (d) None

15. The vertex of central angle is at.....
    (a) circumference
    (b) center
    (c) any point of radius
    (d) any point of diameter

16. The line segment joining the centre and any point of circle is called.
(a) circumference
(b) radial segment
(c) chord
(d) diameters

17. The length of boundary traced by a moving point in a circular path is called...
(a) circumference
(b) radial segment
(c) chord
(d) diameter

18. The ling segment joining any two points of circle is called.
(a) circumference
(b) radial segment
(c) chord
(d) diameter

19. The central chord of circle is its.....
(a) circumference
(b) radial segment
(c) chord
(d) diameter

20. The largest chord of a circle is its.....
(a) circumference
(b) radial segment
(c) chord
(d) diameter

21. A circle of radius 4cm has a chord few cm away from its centre, which of the following length of chord may be?
(a) 6cm (b) 8cm
(c) 10cm (d) 12cm

22. Circumference is the ratio of:
(a) radius and diameter
(b) diameter and circumference
(c) circumference and diameter
(d) circumference and radius

23. $\pi \approx \frac{22}{7}$ is an ..... number.
(a) rational (b) irrational
(c) natural (d) prime

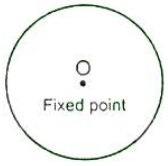
24. If radius of a circle is "r", then its diameter is.....
(a) r^2 (b) $2 + r$
(c) $2r$ (d) $r - 2$

25. If central chord of a circle is 12cm, then its radius is....
(a) 6cm (b) 8cm
(c) 12cm (d) 24cm

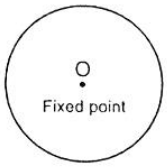
ANSWER KEY

1.	c	**2.**	a	**3.**	d	**4.**	c	**5.**	a
6.	b	**7.**	c	**8.**	b	**9.**	a	**10.**	c
11.	b	**12.**	b	**13.**	d	**14.**	c	**15.**	b
16.	b	**17.**	a	**18.**	c	**19.**	d	**20.**	d
21.	a	**22.**	c	**23.**	b	**24.**	c	**25.**	a

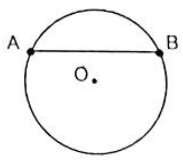
Q. 2 Differentiate between the following terms and illustrate them by diagram.
(i) A circle and a circumference.
Ans.
Circle:
A circle is the locus of a moving point P in a plane which is always equidistant from the fixed point O. This fixed point O not lying on the circle is called the centre of the circle.



Circumference:
The length of the boundary traced by a moving point P in a circular path is called circumference of the circle. Circumference is calculated by $C = 2\pi r$. Here r is a radius and π is an irrational number.

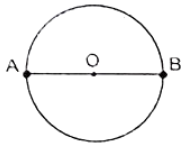


(ii) A chord and the diameter of circle
Ans.
Chord: The Line segment joining any two points of the circle with each other is called chord of the circle.



In figure $\overline{AB}$ is chord of the circle.

Diameter:
The Chord passing through the centre of the circle is called diameter of the circle. Evidently diameter bisects a circle.



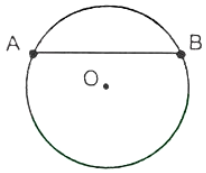
In figure $\overline{AB}$ is diameter of the circle.

(iii) A chord and an arc of a circle.

Ans.

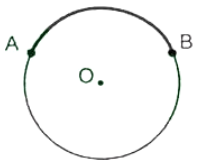
Chord

The Line segment joining any two points of the circle with each other is called chord of the circle.



Arc

Any part or portion of a circle is called its arc. An arc AB, as shown in figure, is denoted by $\overset{\frown}{AB}$.



There are two types of Arc:

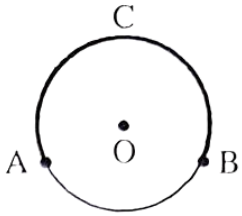
i. Major Arc (Arc greater than semi circle)
ii. Minor Arc (Arc less than semi circle)

(iv) Minor arc and major arc a circle.

Ans.

Major arc:

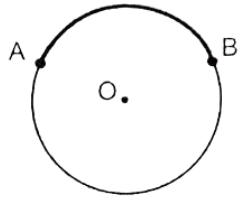
An arc greater than semi circle is called major arc.



In figure ACB is major arc. It is denoted by $\overset{\frown}{ACB}$

Minor Arc:

An arc less than semi circle is called minor arc.



In fig. AB is minor arc. It is denoted by $\overset{\frown}{AB}$

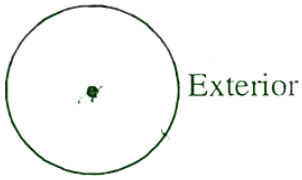
(v) Interior and exterior of a circle.

Ans. Interior:

The set of all the points lying inside the boundary of a circle is called interior of a circle.

Exterior:

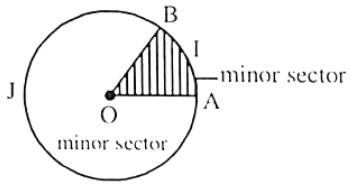
The set of all the points lying outside the boundary of a circle is called interior of a circle.



(vi) A sector and a segment of a circle.

Ans. Sector:

A sector of a circle is the plane figure founded by two radii and the arc intercepted between them.



Segment of circle:

The circular region bounded by an arc and a corresponding chord is called segment of the circle.