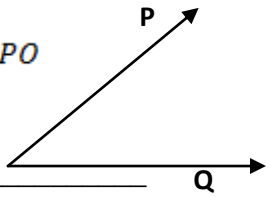
Basic Geometrical Ideas

I) Fill in the blanks :

1. Circles having different radii but the same centre are called _____
2. Radius is _____ of the diameter.
3. The diameter of a circle is the _____chord of the circle.
4. The Perimeter of a circle is called the _____.
5. A quadrilateral has _____ diagonals.
6. A triangle has _____elements.
7. The interior of an angle together with the angle (boundary) itself is called the _____
8. In ΔPQR, the side opposite to $\angle P$ is _____
9. Length of a diameter is _____the radius of a circle.
10. All the radii of a circle are _____

II) Choose the correct answer :

1. The centre of a circle [ ]
   i) Lies in its interior ii)lies in its exterior
   ii) Lies on the circle iv) none of these
2. In quadrilateral PQRS, the two diagonal are [ ]
   i) PQ and RS ii) PR and RS iii) PS and PR
   ii) PR and QS
3. In the figure, the angle can be named as



   i) $< OPQ$ ii) $< POQ$ iii)$< PQO$ iv)$< QPO$
4. A line segment joining any two points on the circle is called a _____
   (i) radius (ii) diameter (iii) chord (iv) secant
5. A closed figure bounded by three or more segments is called a _____
   Curve (ii) Polygon (iii)Circle (iv) None of these
6. A line intersecting a circle at two different points is called a _____of a circle.
   (i) diameter (ii) Radius (iii) secant (iv) centre

7. A closed figure formed by joining three non-collinear points is called

   (i) a triangle (ii) an angle (iii) a curve (iv) none of these

8. An Angle has

   (i) One vertex and one arm

   (ii) One vertex and two arms

   (iii)Two vertex and two arms

   (iv)None of these

9. A circle is

   (i) a polygon (ii) an open curve

   (ii) a closed curve (iv) none of these

10. A Point equidistant from all the Points on a circle is called the _____of the circle.

    (i) Centre (ii) Radius (iii) diameter (iv)None of these

III) *(i)* $\Delta RPQ, \Delta RSP, \Delta SPQ, \Delta SQR \quad \Delta SOP, \Delta POQ, \Delta ROQ, \Delta ROS$

(ii) $\Delta ABC, \Delta ADE, \Delta EFC, \Delta DBF, \Delta DEF$

(iii)$\Delta ABD, \Delta ADC, \Delta ABC$

2. a) Vertices : P, Q, R, S

b)Pair of opposite sides : PQ, SR PS, QR

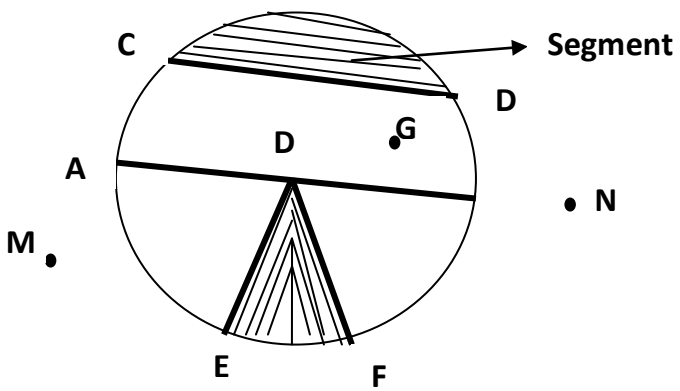
c) Angles : $< P \ < Q, < R, < S$

d) Pair of opposite angles : : $< P \ \& < R, < S \ \& < Q$

e) Pair of adjacent angles : PQ, QR QR, RS

f) Diagonals : PR, SQ

3.



i) Centre –O

ii) A radius – OA, OB, OE, OF

iii) A diameter – AB

iv) A point in its interior – O, G

v) A point in its exterior – M,N

vi) A chord – CD

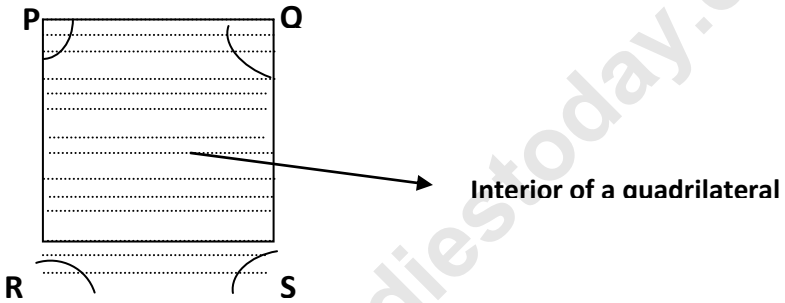
vii) An arc - $\overline{EFO}$

viii) A segment

ix) A sector

x) A point on the circle : A, B, D, F

4 .



5.(i) U, M, r

(ii)p, q

(iii) A, B, C, t

6. (i) 8 Angles : $< ABC, < BCA, < CAB, <ADC, < ACD, < CAD, < BAD, < BCD$

(ii) 3 Angles : $< QPR, < PRQ, < PQR$

(iii) 4 Angles : $< DAB, < ABC, < BCD, < CDA$

7) (i) $< 1 =< ADC \quad < 2 =< AOD \quad < 3 =< DOB \quad < 4 =< BOC$

(ii) $< 1 =< DAB \quad < 2 =< ABD \quad < 3 =< CBD \quad < 4 =< BCD$

$< 5 =< CDB \quad < 6 =< ADB$

(iii) $< 1 =< ABC, < 2 = BCD$