DEPARTMENT OF PUBLIC INSTRUCTION - CHIKKAMAGALURU

MULTIPLE CHOICE QUESTIONS FOR PRACTICE

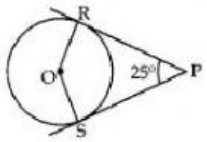
SUBJECT: MATHEMATICS **UNIT: CIRCLES** **CLASS:10**

STUDENT NAME:

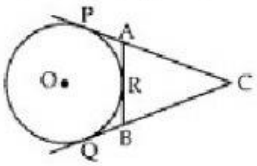
SCHOOL NAME:

Four alternatives /choices are given for each incomplete statement or a question. Click the correct answer.

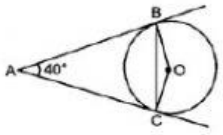
1. The distance between two parallel tangents of a circle of radius 3 cm is
   (a) 2 cm (b) 4 cm (c) 6 cm (d) 8 cm
2. In the given figure, if ∠RPS = 25°, the value of ∠ROS is
   (a) 135° (b) 145° (c) 165° (d) 155°



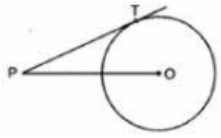
3. A tangent is drawn from a point at a distance of 17 cm from centre to a circle of radius 8 cm. The length of its tangent is
   (a) 5 cm (b) 9 cm (c) 15 cm (d) 23 cm
4. The length of tangents drawn from an external point to the circle
   (a) are equal (b) are not equal
   (c) sometimes are equal (d) are not defined
5. Number of tangents drawn at a point on the circle is/are
   (a) one (b) two (c) none (d) infinite
6. The tangents drawn at the extremities of the diameter of a circle are
   (a) perpendicular (b) parallel (c) equal (d) none of these
7. Number of Tangents from an external point to a circle are
   (a) one (b) two (c) none (d) infinite
8. 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
9. In given figure, CP and CQ are tangents to a circle with centre O. ARB is another tangent touching the circle at R. If CP = 11 cm and BC = 6 cm then the length of BR is
   (a) 6 cm (b) 5 cm (c) 4 cm (d) 3 cm



10. 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
11. In the given figure, AB and AC are tangents to the circle with centre O such that ∠BAC = 40°, then ∠BOC is equal to
    (a) 40° (b) 50° (c) 140° (d) 150°



12. In the given figure, point P is 26 cm away from the centre O of a circle and the length PT of the tangent drawn from P to the circle is 24 cm. Then the radius of the circle is



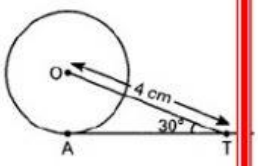
(a) 25 cm (b) 26 cm (c) 24 cm (d) 10 cm

13. A line through point of contact and passing through centre of circle is
(a) Perpendicular to tangent (b) parallel to tangent
(c) parallel to radius (d) parallel to segment

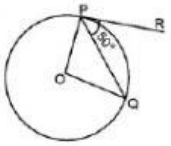
14. The line segment divides the circle in two point is called
(a) Tangent (b) secant
(c) radius (d) chord

15.Two parallel lines touch the circle at points A and B respectively. If area of the circle is $154cm^2$, then AB is equal to
(a) 7 cm
(b) 14 cm
(c) 10 cm
(d) 25 cm

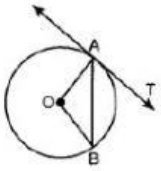
16.In figure AT is a tangent to the circle with centre O such that OT = 4 cm and $\angle OTA = 30°$. Then AT is equal to
(a) 4 cm (b) 2 cm (c) $2\sqrt{3}$ cm (d) $4\sqrt{3}$ cm



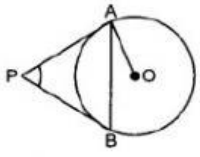
17.In figure if O is centre of a circle, PQ is a chord and the tangent PR at P makes an angle of 50° with PQ, then $\angle POQ$ is equal to
(a) 100°
(b) 80°
(c) 90°
(d) 75°



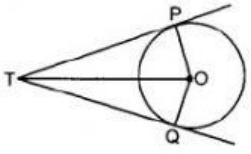
18.If O is the centre of a circle, AB is a chord and AT is the tangent at A. If $\angle AOB = 100°$, then $\angle BAT$ is equal to
(a) 100°
(b) 40°
(c) 50°
(d) 90°



19.If PA and PB are tangents to the circle with centre O. If $\angle APB = 60°$, then $\angle OAB$ is
(a) 30° (b) 60° (c) 90° (d) 15°

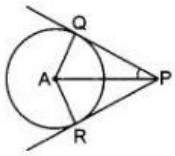


20. In the given figure, TP and TQ are two tangents to a circle with centre O, such that $\angle POQ = 110°$. Then $\angle PTQ$ is equal to
(a) 55° (b) 70° (c) 110° (d) 90°



21. In figure, PQ and PR are tangents to a circle with centre A. If ∠QPA=27°, then ∠QAR equals to

(a) 63° (b) 153° (c) 126° (d) 90°



22..The common point of the tangent and the circle is called _____ .

(a) Point of contact (b) Centre (c) External point (d) Internal point

23. Two concentric circles are of radii 13 cm and 5 cm. The length of the chord of larger circle which touches the smaller circle is _____ .

(a) 20 cm (b) 24 cm (c) 12 cm (d) 13 cm

24. A quadrilateral ABCD is drawn to circumscribe a circle. If AB =12 cm, BC = 15 cm and CD = 14 cm, then AD is equal to _____ .

(a) 12 cm (b) 15 cm (c) 14 cm (d) 11 cm

25.Number of tangents to a circle which are parallel to a secant is _____

(a) 2 (b) 1 (c) 0 (d) 3

26.If the angle between two tangents drawn from an external point P to a circle of radius a and centre O, is 60°, then the angle between radii which are drawn from their point of contact is.

(a) 100° (b) 60° (c) 120° (d) 90°

27. Match the column:

(1) The tangent at any point of a circle is …	(A) known as tangent to the circle
(2) The line which passing through two point of a circle is …	(B) perpendicular to the radius through the point of contact
(3) The lengths of tangents drawn from an external point to a circle are…	(C) called the 'secant' of a circle
(4) When two end points of the corresponding chord of a secant coincide, it is …	(D) equal

(a) 1 → A, 2 → B, 3 → C, 4 → D
(b) 1 → B, 2 → A, 3 → D, 4 → C
(c) 1 → D, 2 → A, 3 → C, 4 → B
(d) 1 → B, 2 → C, 3 → D, 4 → A