O. P. JINDAL SCHOOL, SAVITRI NAGAR

Periodic Test-II (Round –II) 2024 – 2025

Class: IX — MM: 20

Subject: Mathematics — Time: 1Hr

General Instructions:

1. *All questions are compulsory.*
2. *The question paper consists of 13 questions divided in three sections A, B and C.*
3. *Section A contains 8 questions of 1 mark each. Section B contains 3 questions of 2 marks each. Section C contains 2 questions of 3 marks each.*
4. *There is no overall choice. However an internal choice has been provided. You have to attempt only one of the alternatives in all questions.*
5. *Use of calculator is not permitted.*

Section A

Choose the correct answer:

Q1. If a circle is divided into two equal arcs by a chord, then the chord is:

a) Radius b) diameter c) secant d) tangent

Q2. If the angles of a quadrilateral are in the ratio 3:5:9:13, The largest angle of the quadrilateral is:

a) 108° b) 150° c) 156° d) none of these

Q3. Which of the following is not true for a parallelogram?

a) Diagonals bisect each other b) Opposite sides are equal

c)Opposite angles are equal d) Opposite angles are bisected by the diagonals

Q4. The bisectors of any two adjacent angles of a parallelogram intersect at,

a) 30° b) 60° c) 90° d) 45°

Q5. The area enclosed by two radii and the arc determined by the end points of the radii is:

a) Segment b) Sector c) Chord d) none of these

Q6. In a parallelogram the sum of one pair of opposite angles is 130°. Then all angles of the parallelogram are:

a) 90°, 90°, 90°, 90° b) 130°, 50°, 130°, 50° c) 65°, 115°, 65°, 115° d) none of these

Q7. If in a parallelogram, diagonals bisect each other at right angles and are equal then it is a,

a) Rhombus b) Parallelogram c) Square d) Trapezium

Q8. The length of a chord of a circle of diameter 10 cm which is at a distance of 4 cm from the centre is:

a) 3cm b) 4cm c) 6cm d) 5cm

Section B

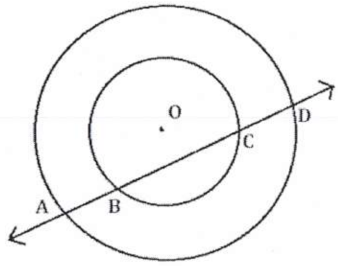
Answer the following questions:

Q9. If the diagonals of a parallelogram are equal, then show that it is a rectangle.

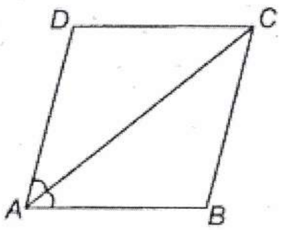
OR

Show that the diagonals of rectangle are equal.

Q10. If a line intersects two concentric circles with centre O at A,B,C and D, prove that AB = CD.



Q11. Diagonal AC of a parallelogram ABCD bisects ∠A. Show that it bisects ∠C also.



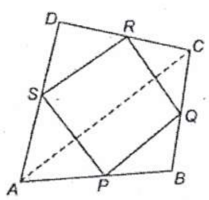
Section C

Q12. "Equal chords of a circle are equidistant (equal distance) from the centre of the circle." Prove it.

OR

Prove that if chords of congruent circles subtend equal angles at their centres, then the chords are equal.

Q13. ABCD is a quadrilateral in which P, Q, R and S are mid-points of the sides AB, BC, CD and DA . AC is a diagonal. Show that
(i) SR || AC and SR = 1/2 AC
(ii) PQ = SR
(iii) PQRS is a parallelogram.



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