

**O. P. JINDAL SCHOOL, SAVITRI NAGAR**  
**Periodic Test - II (2023 – 2024)**

Class: IX

MM: 20

Subject: Mathematics

Time: 1Hrs.

Name: \_\_\_\_\_

Class / Section: \_\_\_\_\_

Roll No.: \_\_\_\_\_

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 AChoose the correct answer:

**Q1.** Congruent circles are those which have same

- a) radii                      b) chords                      c) segments                      d) arcs

**OR**

Longer chord of a circle is \_\_\_\_\_ to the centre than the smaller chord.

- a) equal                      b) far away                      c) nearer                      d) none of these

**Q2.** Which one is not a parallelogram?

- a) kite                      b) rectangle                      c) square                      d) none of these

**Q3.** The diagonals of a parallelogram:

- a) equal                      b) bisect each other                      c) have no relation                      d) none of these

**OR**

Three angles of a quadrilateral are  $75^\circ$ ,  $90^\circ$  and  $75^\circ$ . The fourth angle is

- a)  $120^\circ$                       b)  $90^\circ$                       c)  $100^\circ$                       d) none of these

**Q4.** Which one is true?

- a) Longest chord of the circle is diameter.  
 b) All chords passes through centre of the circle.  
 c) All chords have equal lengths.  
 d) Chords lie in interior and exterior region both.

- Q5.** If chords AB and CD of congruent circles subtend equal angles at their centres, then:  
 a)  $AB = CD$       b)  $AB > CD$       c)  $AB < CD$       d) None of these
- Q6.** The consecutive angles of a parallelogram are:  
 a) equal      b) complementary      c) supplementary      d) none of these
- Q7.** If in a parallelogram its diagonals bisect each other and are equal then it is a,  
 a) Rhombus      b) Parallelogram      c) Square      d) Rectangle
- Q8.** If length of a chord of a circle is 8cm and perpendicular distance of chord from the centre of the circle is 3cm, then find the radius of the circle.  
 a) 8cm      b) 6cm      c) 11cm      d) 5cm

**Section B**

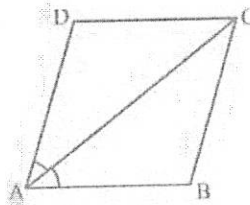
**Answer the following questions:**

- Q9.** Prove that diagonals of a rectangle are equal in length.
- Q10.** "The perpendicular from the centre of a circle to a chord bisects the chord." Prove it.

**OR**

"Equal chords of a circle subtend equal angles at the centre." Prove it.

- Q11.** Diagonal AC of a parallelogram ABCD bisects  $\angle A$ . Show that it bisects  $\angle C$  also.



**Section C**

- Q12.** "Equal chords of a circle are equidistant (equal distance) from the centre of the circle." Prove it.
- Q13.** Prove that opposite angles of parallelogram are equal.

**OR**

If the diagonals of a quadrilateral bisect each other then prove that the quadrilateral is a parallelogram.

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