



TEST PAPER: MATHEMATICS

Time: 50 Minutes

Class: 9th C.B.S.E.

Max. Marks: 30 Marks

Date: 1st July, 2018

Marking Scheme: Four questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

Question 1:

- A. ABCD is a parallelogram such that its diagonals are equal. Show that ABCD is a rectangle.
- B. Show that a diagonal divides a parallelogram in two congruent triangles
- C. Show that diagonals of a parallelogram bisect each other.

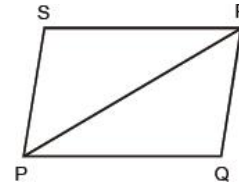
Question 2:

- A. State any three properties of a parallelogram.
- B. Prove that if each pair of opposite sides of a quadrilateral is equal, then it is a parallelogram.
- C. Select the correct option:
 - i. What is the sum of angles of quadrilaterals?
 - I. 90
 - II. 180
 - III. 360
 - IV. 270
 - ii. A quadrilateral with only one pair of opposite sides parallel is called:
 - I. Trapezium
 - II. Square
 - III. Rectangle
 - IV. Rhombus
 - iii. The consecutive angles of a parallelogram are
 - I. Complementary
 - II. Supplementary
 - III. Equal
 - IV. None of these
 - iv. If in a parallelogram its diagonals bisect each other and are equal then it is a,
 - I. Square
 - II. Rectangle
 - III. Rhombus
 - IV. Parallelogram

Question 3:

- A. In the given figure PR is a diagonal of the parallelogram PQRS.

- (i) Is $PS = RQ$? Why?
- (ii) Is $SR = PQ$? Why?
- (iii) Is $PR = RP$? Why?
- (iv) Is $\Delta PSR \cong \Delta RQP$? Why?



- B. In a parallelogram ABCD find the measure of all the angles if one angle measures 68° .
- C. Select the correct option:
 - i. If in a parallelogram its diagonals bisect each other at right angles and are equal, then it is a
 - I. Square
 - II. Rectangle
 - III. Rhombus
 - IV. Parallelogram
 - ii. The quadrilateral formed by joining the mid-points of the sides of a quadrilateral ABCD taken in order is a square only if
 - I. ABCD is a rhombus
 - II. Diagonals of ABCD are equal
 - III. Diagonals of ABCD are equal and perpendicular
 - IV. Diagonals of ABCD are perpendicular
 - iii. Which of the following is not true?
 - I. Every square is a rectangle
 - II. Every rectangle is a quadrilateral
 - III. Every parallelogram is a trapezium
 - IV. None of these
 - iv. Which of the following is not true for a parallelogram?
 - I. Diagonals bisect each other
 - II. Opposite sides are equal
 - III. Opposite angles are equal
 - IV. Opposite angles are bisected by the diagonals