TRIANGLES	CM090701

Multiple Choice Questions :   **1 mark each**

1. In ΔABC and ΔPQR, AB = PR and ∠A = ∠P. The two triangles will be congruent by SAS axiom if:

(a) BC = QR   (b) AC = PQ   (c) AC = QR   (d) BC = PR

2. If ΔABC ≅ ΔDEF by SSS congruence rule then :

(a) AB = EF, BC = FD, CA = DE   (b) AB = FD, BC = DE, CA = EF

(c) AB = DE, BC = EF, CA = FD   (d) AB = DE, BC = EF, ∠C = ∠F

3. If one angle of a triangle is equal to the sum of the other two angles, then the triangle is :

(a) an isosceles triangle   (b) an obtuse angled triangle

(c) an equilateral triangle   (d) a right triangle

4. ΔABC ≅ ΔPQR. If AB = 2 cm, ∠B = 50° and ∠A = 60°, then which of the following is true?

(a) QP = 5 cm, ∠P = 60°   (b) QP = 2 cm, ∠R = 60°

(c) QR = 5 cm, ∠R = 60°   (d) QP = 2 cm, ∠Q = 50°

5. Given ΔOAP ≅ ΔOBP in the figure. The criteria by which the triangles are congruent is :
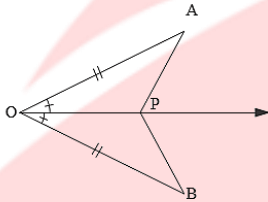
(a) SAS   (b) SSS   (c) RHS   (d) ASA

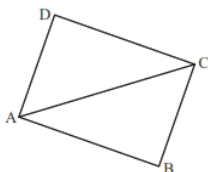**Very Short Answer Type Questions :**   **2 marks each**

6. In the figure, AX = BY and AX||BY, prove that ΔAPX ≅ ΔBPY.
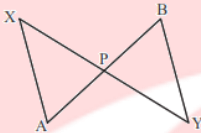
7. In the figure, D is the mid-point of base BC, DE and DF are perpendiculars to AB and AC respectively such that DE = DF. Prove that ∠B = ∠C.
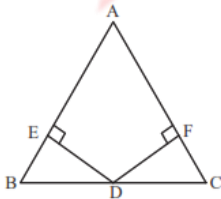
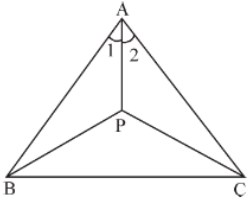8. In the figure, the diagonal AC of quadrilateral ABCD bisects ∠BAD and ∠BCD. Prove that BC = CD.

Short Answer Type Questions :   **3 marks each**

9. In the figure, AB = AC and ∠1 = ∠2. Prove that ∠PBC = ∠PCB.

10. In an isosceles triangle ABC with AB = AC, BD and CE are two medians. Prove that BD = CE.

11. AD is an altitude of an isosceles triangle ABC in which AB = AC. Show that AD is also the median of the triangle.

Long Answer Type Questions :   **5 marks each**

12. In the figure, if two isosceles triangles have a common base, prove that the line segment joining their vertices bisects the common base at right angles.
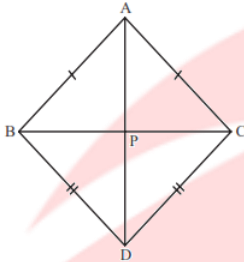
13. In the figure, PQ and RS are perpendicular to QS, QA = BS and PB = AR. Prove that ∠QPB = ∠SRA.