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Sample Question Paper - SET 1

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Class	XII	Subject	Mathematics (041)
Chapter	10 - Vector Algebra	Time Allowed	12 Minutes
Maximum Marks	6	Date	_____

GENERAL INSTRUCTIONS:

1. This question paper contains **3 questions** from Chapter 10 - Vector Algebra.
2. All questions are compulsory.
3. Question 1 carries **1 mark**.
4. Question 2 carries **2 marks**.
5. Question 3 carries **3 marks**.
6. Show all steps of your calculations clearly.
7. Use proper mathematical notation and terminology.

HOW TO SUBMIT:

1. Solve this question paper in your notebook or on loose sheets.
2. Clearly write your **Name, CBSE Roll Number, School Name, Place, and Date** on the first page.
3. Upload your solved paper at our website: **www.mathlove.in**
4. Check your **detailed report card on the website** after evaluation.
5. For any queries or assistance, WhatsApp us at **+91-7869553517**

SECTION A - 1 MARK QUESTION (1 × 1 = 1 Mark)

Q1. If **a** and **b** are two unit vectors such that **a** + **b** is also a unit vector, then the angle between **a** and **b** is:

(A) π/6 (B) π/4 (C) π/3 (D) 2π/3 **[1]**

SECTION B - 2 MARKS QUESTION (1 × 2 = 2 Marks)

Q2. Find the angle between the vectors **a** = $\hat{i} + \hat{j} - \hat{k}$ and **b** = $\hat{i} - \hat{j} + \hat{k}$. **[2]**

SECTION C - 3 MARKS QUESTION (1 × 3 = 3 Marks)

Q3. Find the area of the triangle whose vertices are A(1, 2, 3), B(2, -1, 4), and C(4, 5, -1). Also verify that the points A, B, and C are not collinear. **[3]**

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