Use of Vector in Geometry paper Level- II

your Name :

Notice:
1. For every 10 Question there are 20 minutes
2 Each question require detail answer & awarded 3 marks.
3 Each incorrect & unclear answer awarded -2 marks.

Time: Accordingly

Each question require detail answer with fig.

Test_Paper: **Vector_Test_LG1_P2**

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1 Find the area of the parrellelogram whose diagonals are $\vec{a} = 2\hat{i} + 3\hat{j} - 9\hat{k}$ and $\vec{b} = 3\hat{i} + 4\hat{j} + 2\hat{k}$.

2 Prove by vector method that line joining the mid points of two sides of a traingle is parrallel and half of the third side.

3 Prove by vector method that diagonals of a rohumbs are right angled.

4 Prove by vector method that angle of semicircle is always right angle.

5 Prove the following formula by vector method:

(a) $\cos(\alpha \pm \beta) = \cos\alpha.\cos\beta \mp \sin\alpha.\sin\beta$

(b) $\sin(\alpha \pm \beta) = \sin\alpha.\cos\beta \mp \cos\alpha.\sin\beta$

(c) $a = b\cos C + c\cos B$

(d) $\cos A = \dfrac{b^2 + c^2 - a^2}{2bc}$

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