Name: _____
Student ID: _____

Quiz 5

This quiz is graded out of 8 marks. No books, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. Let $S = \{1,2,3,4,5,6\}$.

a. *(1 mark)* Give two permutations of the set S.

b. *(1 mark)* Is $(2,1,3,5,4)$ a permutation of the set S, justify.

c. *(2 marks)* Determine the parity of the permutation $(5,2,1,6,3,4)$ of the set S.

Question 2. Let $\mathbf{u} = (-3,2,-1)$, $\mathbf{v} = (0,1,-2)$, $\mathbf{w} = (1,0,-2)$, $P_1(0,-2)$, $P_2(2,-3)$.

a. *(2 marks)* Simplify $0\mathbf{w} + (-2\mathbf{u} + 3\mathbf{v}) + 3\mathbf{u}$.

b. *(2 marks)* Find the vector having initial point P_1 and terminal point P_2.