BAHRIA UNIVERSITY, (Karachi Campus)

Department of Software Engineering

ASSIGNMENT #: 3 – Fall 2022

COURSE TITLE:	**Applied Physics**	COURSE CODE:	**GSC-114**
Class:	**BSE - 1(A & B)**	Shift:	**Morning**
Course Instructor:	**Engr. Rizwan Fazal**	Date:	**04-Jan-2023**
Due Date:	**15-January-2023 (11:59 pm)**	Max. Marks:	**10 Points**

Q1. Find if the following given vectors are Collinear? **[2 marks]**

a) $\vec{A}$ = (3, 4, 5), and $\vec{B}$ = (6, 8, 10)

b) $\vec{A}$ = (3, 4, 0), and $\vec{B}$ = (2, 2, 1)

Q2. Find if the following given vectors are Coplanar? **[2 marks]**

a) $\vec{A}$ = (1, 2, 3), $\vec{B}$ = (2, 4, 6), and $\vec{C}$ = (3, 4, 5)

b) $\vec{A}$ = (5, -1, 1), $\vec{B}$ = (-2, 3, 4), and $\vec{C}$ = (3, 4, 5)

Q3. Find the Scalar Triple Product of the given vectors? **[2 marks]**

a) $\vec{A}$ = (1, 2, 3), $\vec{B}$ = (4, 5, 6), and $\vec{C}$ = (2, 6, 5)

b) $\vec{A}$ = (5, -1, 1), $\vec{B}$ = (-2, 0, 4), and $\vec{C}$ = (3, 4, 5)

Q4. Find the Area of Triangle determined by two vectors? **[2 marks]**

a) $\vec{A}$ = (1, 2, 3), $\vec{B}$ = (4, 5, 6)

b) $\vec{A}$ = (5, -1, 1), $\vec{B}$ = (-2, 3, 4)

Q5. Find the Volume of Parallelepiped determined by following vectors? **[2 marks]**

a) $\vec{A}$ = (1, 2, 3), $\vec{B}$ = (3, 0, 6), and $\vec{C}$ = (7, 1, 9)

b) $\vec{A}$ = (5, -1, 1), $\vec{B}$ = (-2, 3, 4), and $\vec{C}$ = (3, 4, 5)

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ASSIGNMENT #. 3

Submitted by:

Name:_____

Registration #:_____

Section:_____