

Course No: EGGC1203
Course Title: General Physics I
Date: 13 / 07 / 2011
No. of Questions: (2)
Time: 60 min
Using Calculator (Yes)

University of Palestine



Midterm Exam
Summer 2010/2011
Total Grade: 20

Instructor Name: _____
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist: _____
Using Dictionary (No)

First Question

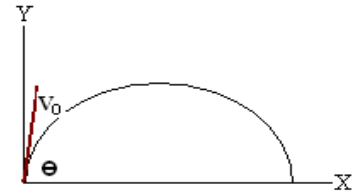
(10/20)

1) Given the vectors $A = 3i - 3j + 2k$, $B = i - 4j - k$, and $C = -2i + 5j + 3k$, Find:

1- $D = A \times B$

2- $C \cdot D$

2) A projectile is launched from the rest at angle θ , with initial velocity V_0 as shown in figure, determine the maximum height and horizontal range of the projectile



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Second Question

(10/20)

- 1) A stone is dropped from rest from the top of a building. After 3s of free fall, a) what is the displacement y of the stone? b) What is the velocity of the stone at this moment?
- 2) A particle initially located at the origin has an acceleration of $\mathbf{a} = 3 \mathbf{j} \text{ m/s}^2$ and an initial velocity of $V_i = 50\mathbf{i} - 16\mathbf{j} \text{ m/s}$. Find (a) the vector position and velocity at any time t and (b) the coordinates and speed of the particle at $t = 3.00 \text{ s}$.

End of Questions