

EM 600 Engineering Economics and Cost Analysis, **Homework #6**  
*School of Systems & Enterprises, Stevens Institute of Technology*

**“I PLEDGE MY HONOR THAT I HAVE ABIDED BY THE STEVENS HONOR SYSTEM”**

By: \_\_\_\_\_

**QUESTION 1:**

Escobar Supplements has failed to meet FDA requirements and will need to change the way it conducts its business. There are two mutually exclusive options under consideration by the company which will get the company back on track with meeting FDA requirements, but will take the company in two very different directions. Project 1 has the company making all of the necessary corrections to their manufacturing processes to meet FDA requirements in order to continue producing their flu vaccine. Project 2 has the company completely rerouting their direction by producing drugs that fight cancer. Each project has an economic service life of 1 year with no salvage value. The initial cost and the net-year-end revenue for each project are given in the following table:

	<b>Option 1</b>		<b>Option 2</b>	
<b>Initial Cost</b>	\$44,000		\$40,000	
	<b>Probability</b>	<b>Revenue</b>	<b>Probability</b>	<b>Revenue</b>
<b>Net Revenue given in PW</b>	0.35	\$40,000	0.25	\$36,000
	0.40	\$50,000	0.45	\$44,000
	0.25	\$56,000	0.30	\$50,000

Assuming both projects are statistically independent of each other,

- a. Calculate the expected value for each project. **[5 points]**
- b. Calculate the variance for each project. **[5 points]**
- c. Which project should be chosen? Why? **[1 + 1 points]**

**QUESTION 2:**

- a. List four financial statements? **[1+1+1+1 points]**
- b. What is the goal of T-accounts? **[1 points]**
- c. What is the fundamental equation of accounting? **[1 points]**
- d. Define what an Asset is and differentiate between the two different types of assets? **[1+ 1 + 1 points]**
- e. With respect to time, what is the primary difference between the income statement and the balance sheet? **[1 points]**
- f. What is a credit? **[1 points]**
- g. Define what a liability is and differentiate between the two different types of liabilities?

Name\_\_\_\_\_ E-mail\_\_\_\_\_

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**[1+ 1 + 1 points]**

h. List 3 limitations of financial ratios? **[1+1+1 points]**

i. What is a debit? **[1 points]**