Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: BCOM-H-TAX **Semester: VI**
Program: Security Analysis and Portfolio Management **Time: 03 hrs.**
Course Code: FINC 3010 **Max. Marks: 100**

Instructions:

SECTION A
10Qx2M=20Marks

S. No.		**Marks**	**CO**
Q 1	MCQ		
I.	According to the CAPM, which of the following is true about an asset with a beta of 0? a) It has no risk. b) It has only unsystematic risk. c). It has the same expected return as the risk-free rate. d) It has a higher expected return than the risk-free rate.	**2**	**CO1**
II.	Which of the following is true about the security market line (SML) in the CAPM? a). It represents the relationship between the expected return and beta of individual assets. b) It represents the relationship between the expected return and total risk of individual assets. c) It represents the relationship between the expected return and unsystematic risk of individual assets. d) It represents the relationship between the expected return and liquidity risk of individual assets.	**2**	**CO1**

III.	What is the market risk premium in the CAPM? a). The difference between the expected return on the market and the risk-free rate. b) The difference between the expected return on a stock and the risk-free rate. c) The difference between the expected return on a bond and the risk-free rate. d) The difference between the expected return on an option and the risk-free rate.	**2**	**CO1**
IV.	Which form of the Efficient Market Hypothesis suggests that all publicly available information is already reflected in stock prices? a) Weak form. b). Semi-strong form. c) Strong form. d) None of the above.	**2**	**CO1**
V.	According to the Efficient Market Hypothesis, which of the following is true? a). Stock prices always reflect all available information. b) Stock prices never reflect all available information. c) Stock prices sometimes reflect all available information. d) Stock prices reflect some, but not all, available information.	**2**	**CO1**
VI.	Which of the following is a measure of a security's risk-adjusted return? a) Standard deviation. b) Beta. c). Sharpe ratio. d) None of the above.	**2**	**CO1**

VII.	Which of the following is a measure of a security's systematic risk? a) Standard deviation. b). Beta. c) Sharpe ratio. d) None of the above.	**2**	**CO1**
VIII.	Which of the following is NOT a type of market risk? a) Interest rate risk. b) Currency risk. c) Business risk. d). None of the above.	**2**	**CO1**
IX.	Which of the following is a type of risk associated with investments? a) Market risk. b) Credit risk. c) Inflation risk. d). All of the above.	**2**	**CO1**
X.	Which of the following is NOT a benefit of diversification? a) Reduced risk. b). Increased returns. c) Increased stability. d) None of the above.	**2**	**CO1**
SECTION B **4Qx5M= 20 Marks**			

<table>
<tr><td>Q2</td><td>Suppose a share is currently selling at ₹220. An investor who is interested in the share anticipates that the company will pay a dividend of Rs 6 in the next year. Moreover, he expects to sell the share at ₹185 after one year. Calculate the expected return from the investment.</td><td>5</td><td>CO2</td></tr>
<tr><td>Q3</td><td>Explain the concept of unsystematic risk. What are the different types of unsystematic risk</td><td>2+3</td><td>CO2</td></tr>
<tr><td>Q4</td><td>What is beta? How it is interpreted?</td><td>2+3</td><td>CO2</td></tr>
<tr><td>Q5</td><td>write notes on:

a) purchasing risk; and

b) market risk</td><td>2.5+2.5</td><td>CO2</td></tr>
<tr><td colspan="4" align="center">SECTION-C
3Qx10M=30 Marks</td></tr>
<tr><td>Q6</td><td>From the following information you are required to calculate the risk.
<table>
<tr><td>Possible return</td><td>Probability</td></tr>
<tr><td>30</td><td>0.20</td></tr>
<tr><td>40</td><td>0.40</td></tr>
<tr><td>50</td><td>0.30</td></tr>
<tr><td>60</td><td>0.20</td></tr>
<tr><td>70</td><td>0.10</td></tr>
</table></td><td>10</td><td>CO3</td></tr>
<tr><td>Q7</td><td>With the following information, you are required to calculate the Beta of a stock using regression model:
ΣXY = 2160.49; ΣX = 49.82; ΣY = 111.69; ΣX2 = 1432.75; n = 12
Where, Y is the stock return and X is the market return.</td><td>10</td><td>CO3</td></tr>
<tr><td>Q8</td><td>Calculate the expected return and variance of a portfolio comprising two securities, assuming that the portfolio weights are 0.75 for security 1 and 0.25 for security 2. The expected return of security one is 18% and its standard deviation is 12%, while the expected return and standard deviation of security 2 are 22% and 20% respectively. the correlation of the 2 securities is 0.6.</td><td>10</td><td>CO3</td></tr>
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<tr><td colspan="4">SECTION-D
2Qx15M= 30 Marks</td></tr>
<tr><td>Q9</td><td>an investor owns a portfolio composed of 5 securities with the following characteristics:
<table><tr><th>Security</th><th>beta</th><th>Random error term standard deviation (percent)</th><th>Proportion</th></tr><tr><td>1</td><td>1.35</td><td>5</td><td>0.1</td></tr><tr><td>2</td><td>1.05</td><td>9</td><td>0.2</td></tr><tr><td>3</td><td>0.80</td><td>4</td><td>0.15</td></tr><tr><td>4</td><td>1.50</td><td>12</td><td>0.30</td></tr><tr><td>5</td><td>1.12</td><td>8</td><td>0.25</td></tr></table>
If the standard deviation of the market index is 20%, what is the total risk of the portfolio?</td><td>15</td><td>CO3</td></tr>
<tr><td>Q10</td><td>a) Explain the concept of CAPM along with its assumptions.

b) Explain the concept of efficient frontier in the context of portfolio selection.

c) List the limitations of Markowitz model of portfolio selection.</td><td>3*5=15</td><td>CO4</td></tr>
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