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| **Name:**<br><br>**Enrolment No:** | UPES UNIVERSITY OF TOMORROW |

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

**Course: BA-ECO** | **Semester: VI**
**Program: Financial Economics** | **Time: 03 hrs.**
**Course Code: ECON 3017** | **Max. Marks: 100**

**Instructions:**

**SECTION A**
**10Qx2M=20Marks**

| S. No. | | Marks | CO |
|---|---|---|---|
| Q 1 | MCQ | | |
| I. | Which of the following factors affect the time value of money?<br><br>a) Inflation<br><br>b) Interest rates<br><br>c). Both a) and b)<br><br>d) None of the above | **2** | **CO1** |
| II. | Which of the following is an example of diversification in portfolio management?<br><br>a) Investing all funds in a single stock<br><br>b) Investing all funds in a single sector<br><br>c). Investing funds in multiple stocks across different sectors<br><br>d) Investing funds in multiple stocks within the same sector | **2** | **CO1** |
| III. | Which of the following is not a factor that should be considered when constructing a portfolio?<br><br>a) Investment horizon<br><br>b) Risk tolerance | **2** | **CO1** |

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| | c). Market trends<br><br>d) Financial goals | | |
| IV. | The Capital Asset Pricing Model (CAPM) is used to:<br><br>a) Calculate a stock's intrinsic value<br><br>b) Measure a stock's risk<br><br>c). Estimate a stock's expected return<br><br>d) All of the above | **2** | **CO1** |
| V. | The term "diversification" refers to:<br><br>a) Investing in multiple stocks in the same industry<br><br>b) Investing in stocks and bonds<br><br>c.) Spreading investments across different asset classes and sectors<br><br>d) Investing in high-risk, high-reward stocks | **2** | **CO1** |
| VI. | The time value of money refers to:<br><br>a) The fact that money can earn interest over time<br><br>b) The fact that the value of money changes over time due to inflation<br><br>c) The fact that the present value of money is greater than its future value<br><br>d).The fact that the future value of money is greater than its present value | **2** | **CO1** |
| VII. | An investor who wants to invest in a portfolio of stocks that replicates the performance of a market index would choose:<br><br>a) An actively managed mutual fund<br><br>b). A passively managed mutual fund or an exchange-traded fund (ETF)<br><br>c) A hedge fund | **2** | **CO1** |

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| | d) A private equity fund | | |
| VIII. | The term "leverage" refers to:<br><br>a). The use of borrowed funds to increase potential returns<br><br>b) The degree of risk associated with an investment<br><br>c) The potential return on an investment<br><br>d) The market value of an asset | **2** | **CO1** |
| IX. | Which of the following is not a capital budgeting technique?<br><br>a) Payback period<br><br>b) Internal rate of return (IRR)<br><br>c) Net present value (NPV)<br><br>d). Market capitalization | **2** | **CO1** |
| X. | What is the payback period in capital budgeting?<br><br>a). The time it takes to earn back the initial investment<br><br>b) The time it takes for the project to break even<br><br>c) The time it takes to achieve a specified rate of return<br><br>d) The time it takes for the project to reach its maximum value | **2** | **CO1** |
| **SECTION B**<br>**4Qx5M= 20 Marks** | | | |
| Q2 | Mr. Nadeem owes a total of $4,060 which includes 12% interest for the three years he borrowed the money. How much did he originally borrow? | **5** | **CO2** |
| Q3 | Explain the concept of unsystematic risk. What are the different types of unsystematic risk | 2+3 | **CO2** |
| Q4 | What is beta? How it is interpreted? | **2+3** | **CO2** |

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| Q5 | write notes on:<br><br>a) purchasing power risk; and<br><br>b) market risk | **2.5+2.5** | **CO2** |
| **SECTION-C**<br>**3Qx10M=30 Marks** | | | |
| Q6 | From the following information you are required to calculate the risk.<br><br>Possible return / Probability:<br>40 / 0.10<br>50 / 0.30<br>60 / 0.40<br>70 / 0.10<br>80 / 0.10 | **10** | **CO3** |
| Q7 | With the following information, you are required to calculate the Beta of a stock using regression model:<br>ΣXY = 2160.49; ΣX = 49.82; ΣY = 111.69; ΣX2 = 1432.75; n = 12<br>Where, Y is the stock return and X is the market return. | **10** | **CO3** |
| Q8 | Initial investment is Rs 20,000<br><br>Net Cash Flow at the end of:<br><br>1st year = Rs 15,000; 2nd year = Rs. 3,500; 3rd year =Rs. 8,000; 4th year= 8,000.<br><br>Cost of Capital/Discount Rate is 10%.<br><br>The present Value of Re 1 at 10% cost of capital from 1st year to 4th year are 0.909, 0.826, 0.751, and 0.683.<br><br>Calculate Net-Present Value and comment on the same. | **10** | **CO3** |
| **SECTION-D**<br>**2Qx15M= 30 Marks** | | | |

Q6 data:

| Possible return | Probability |
|---|---|
| 40 | 0.10 |
| 50 | 0.30 |
| 60 | 0.40 |
| 70 | 0.10 |
| 80 | 0.10 |

<table>
<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>0.10</td></tr>
<tr><td>2</td><td>1.05</td><td>9</td><td>0.20</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>
<br>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>
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<tr>
<td>Q10</td>
<td>a) ABC Co Ltd. Issues 1000, 10% debenture of Rs 100 each at a premium of 2% redeemable debenture after 10 years. If the marginal tax rate is 50%, find out the after-tax cost of debenture.<br><br>b) Suppose a share is currently selling at ₹120. An investor who is interested in the share anticipates that the company will pay a dividend of Rs 5 in the next year. Moreover, he expects to sell the share at ₹175 after one year. Calculate the expected return from the investment.</td>
<td>10<br>+<br>10<br>=15</td>
<td>CO4</td>
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