

CBCS SCHEME

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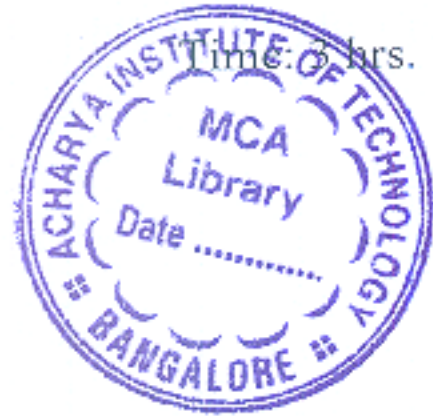
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22MBAFM304

Third Semester MBA Degree Examination, June/July 2025 Security Analysis and Portfolio Management

Time: 3 hrs.

Max. Marks: 100



- Note: 1. Answer any FOUR full questions from Q1 to Q7.
2. Question No.8 is compulsory.
3. M : Marks, L: Bloom's level, C: Course outcomes.
4. Use of PV tables permitted.*

| | | | M | L | CO | | | | | | | | | | | |
|-------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|-----|---|---|------|----|----|------|----|----|----|----|-----|
| Q.1 | a. | Differentiate investment from speculation. | 03 | L2 | CO1 | | | | | | | | | | | |
| | b. | Explain the forms of market hypothesis and the different tests of market efficiency. | 07 | L2 | CO3 | | | | | | | | | | | |
| | c. | Stock M and N have yielded the following returns for the past two years. <table border="1"><thead><tr><th rowspan="2">Years</th><th colspan="2">Returns %</th></tr><tr><th>M</th><th>N</th></tr></thead><tbody><tr><td>2022</td><td>12</td><td>14</td></tr><tr><td>2023</td><td>18</td><td>12</td></tr></tbody></table> Evaluate the portfolio made up of 60% of M and 40% of N in terms of its risk and return. | Years | Returns % | | M | N | 2022 | 12 | 14 | 2023 | 18 | 12 | 10 | L5 | CO2 |
| Years | Returns % | | | | | | | | | | | | | | | |
| | M | N | | | | | | | | | | | | | | |
| 2022 | 12 | 14 | | | | | | | | | | | | | | |
| 2023 | 18 | 12 | | | | | | | | | | | | | | |

| Q.2 | a. | The equity stock of Raj Ltd is currently selling for Rs. 30 per share. The dividend expected next year is Rs. 2. The investor's required rate of return on this stock is 15%. If the constant growth model applies to Raj Ltd., what is the expected growth rate? | 03 | L3 | CO2 | | | | | | | | | | | | | | | | | | | | |
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| | b. | Describe the investment process in detail. | 07 | L2 | CO1 | | | | | | | | | | | | | | | | | | | | |
| | c. | Consider the following information for three mutual funds A, B and C and the market. <table border="1"><thead><tr><th></th><th>Mean return %</th><th>Standard deviation %</th><th>Beta</th></tr></thead><tbody><tr><td>A</td><td>12</td><td>18</td><td>1.1</td></tr><tr><td>B</td><td>10</td><td>15</td><td>0.9</td></tr><tr><td>C</td><td>13</td><td>20</td><td>1.2</td></tr><tr><td>Market</td><td>11</td><td>17</td><td>1.0</td></tr></tbody></table> The mean risk free rate was 6 percent. Calculate the Treynox Measure, Sharpe measure and Jenson measure for the three mutual funds and the market index. | | Mean return % | Standard deviation % | Beta | A | 12 | 18 | 1.1 | B | 10 | 15 | 0.9 | C | 13 | 20 | 1.2 | Market | 11 | 17 | 1.0 | 10 | L3 | CO4 |
| | Mean return % | Standard deviation % | Beta | | | | | | | | | | | | | | | | | | | | | | |
| A | 12 | 18 | 1.1 | | | | | | | | | | | | | | | | | | | | | | |
| B | 10 | 15 | 0.9 | | | | | | | | | | | | | | | | | | | | | | |
| C | 13 | 20 | 1.2 | | | | | | | | | | | | | | | | | | | | | | |
| Market | 11 | 17 | 1.0 | | | | | | | | | | | | | | | | | | | | | | |

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| Q.3 | a. | Explain efficient frontier. | 03 | L2 | CO4 | | | | | | | | | | | | | | | |
| | b. | Briefly explain the differences between fundamental and technical analysis. | 07 | L2 | CO3 | | | | | | | | | | | | | | | |
| | c. | <p>The Evergreen investment company manages a stock fund consisting of four stocks with the following market values and betas.</p> <table><tr><td>Stock</td><td>Market value</td><td>Beta</td></tr><tr><td>Bell</td><td>2,00,000</td><td>1.16</td></tr><tr><td>Sell</td><td>1,00,000</td><td>1.20</td></tr><tr><td>Grill</td><td>1,50,000</td><td>0.80</td></tr><tr><td>Shrill</td><td>50,000</td><td>0.50</td></tr></table> <p>If the risk free rate of return is 9% and the market return is 15%, what is the portfolio's expected return?</p> | Stock | Market value | Beta | Bell | 2,00,000 | 1.16 | Sell | 1,00,000 | 1.20 | Grill | 1,50,000 | 0.80 | Shrill | 50,000 | 0.50 | 10 | L4 | CO4 |
| Stock | Market value | Beta | | | | | | | | | | | | | | | | | | |
| Bell | 2,00,000 | 1.16 | | | | | | | | | | | | | | | | | | |
| Sell | 1,00,000 | 1.20 | | | | | | | | | | | | | | | | | | |
| Grill | 1,50,000 | 0.80 | | | | | | | | | | | | | | | | | | |
| Shrill | 50,000 | 0.50 | | | | | | | | | | | | | | | | | | |
| Q.4 | a. | Explain breadth of market. | 03 | L2 | CO3 | | | | | | | | | | | | | | | |
| | b. | The market price of a Rs. 1000 par-value bond carrying a coupon rate of 14% and maturity after 5 years is Rs. 1050. What is the approximate YTM of this band? What will be the realized yield to maturity if the reinvestment rate is 12%? | 07 | L3 | CO2 | | | | | | | | | | | | | | | |
| | c. | Pioneer Ltd's earnings and dividend have been growing at a rate of 18% per annum. The growth rate is expected to continue for 4 years. After that the growth rate will fall to 12% for the next 4 years. Thereafter the growth rate is expected to be 6% forever. If the last dividend per share was Rs. 2.00 and the investors expected rate of return on equity is 15%. Determine the intrinsic value of share. | 10 | L5 | CO2 | | | | | | | | | | | | | | | |
| Q.5 | a. | Differentiate money market and capital market. | 03 | L2 | CO1 | | | | | | | | | | | | | | | |
| | b. | Describe briefly the important investment avenues available to investors in India. | 07 | L2 | CO1 | | | | | | | | | | | | | | | |
| | c. | <p>The following information is available.</p> <table><tr><td></td><td>Stock A</td><td>Stock B</td></tr><tr><td>Expected return</td><td>16%</td><td>12%</td></tr><tr><td>Standard deviation</td><td>15%</td><td>8%</td></tr><tr><td>Coefficient of correlation</td><td>0.60</td><td></td></tr></table> <p>i) What is the covariance between stock A and B? ii) What is the expected risk and return of a portfolio in which A and B have weight of 0.6 and 0.4.</p> | | Stock A | Stock B | Expected return | 16% | 12% | Standard deviation | 15% | 8% | Coefficient of correlation | 0.60 | | 10 | L3 | CO2 | | | |
| | Stock A | Stock B | | | | | | | | | | | | | | | | | | |
| Expected return | 16% | 12% | | | | | | | | | | | | | | | | | | |
| Standard deviation | 15% | 8% | | | | | | | | | | | | | | | | | | |
| Coefficient of correlation | 0.60 | | | | | | | | | | | | | | | | | | | |

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| Q.6 | a. | Explain Japanese Candlestick. | 03 | L2 | CO3 | | | | | | | | | | | | | | | | | | | | |
| | b. | Explain mutual funds. Discuss the advantages of mutual funds. | 07 | L2 | CO4 | | | | | | | | | | | | | | | | | | | | |
| | c. | <p>The following table gives data for four stocks.</p> <table><tr><td>Stock</td><td>Alpha</td><td>Systematic risk</td><td>Unsystematic risk</td></tr><tr><td>A</td><td>-0.6</td><td>5</td><td>4</td></tr><tr><td>B</td><td>0.10</td><td>2</td><td>6</td></tr><tr><td>C</td><td>0.00</td><td>3</td><td>1</td></tr><tr><td>D</td><td>-0.14</td><td>3</td><td>2</td></tr></table> <p>The market is expected to have a 12% return over a period with a variance of 6%. Calculate the expected return for a portfolio consisting of equal portions of stock A, B, C and D.</p> | Stock | Alpha | Systematic risk | Unsystematic risk | A | -0.6 | 5 | 4 | B | 0.10 | 2 | 6 | C | 0.00 | 3 | 1 | D | -0.14 | 3 | 2 | 10 | L4 | CO4 |
| Stock | Alpha | Systematic risk | Unsystematic risk | | | | | | | | | | | | | | | | | | | | | | |
| A | -0.6 | 5 | 4 | | | | | | | | | | | | | | | | | | | | | | |
| B | 0.10 | 2 | 6 | | | | | | | | | | | | | | | | | | | | | | |
| C | 0.00 | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| D | -0.14 | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Q.7 | a. | A's Ltd currently pays a dividend of Rs. 15 per share. The required rate of return is 18%. Calculate the value of share. | 03 | L3 | CO2 | | | | | | | | | | | | | | | | | | | | |
| | b. | <p>Stock X and Y have the following parameters.</p> <table><tr><td></td><td>X</td><td>Y</td></tr><tr><td>Return</td><td>20</td><td>30</td></tr><tr><td>Risk (variance)</td><td>16</td><td>25</td></tr><tr><td>Covariance XY</td><td>20</td><td></td></tr></table> <p>Is there any advantage of holding a combination of X and Y?</p> | | X | Y | Return | 20 | 30 | Risk (variance) | 16 | 25 | Covariance XY | 20 | | 07 | L5 | CO4 | | | | | | | | |
| | X | Y | | | | | | | | | | | | | | | | | | | | | | | |
| Return | 20 | 30 | | | | | | | | | | | | | | | | | | | | | | | |
| Risk (variance) | 16 | 25 | | | | | | | | | | | | | | | | | | | | | | | |
| Covariance XY | 20 | | | | | | | | | | | | | | | | | | | | | | | | |
| | c. | Elaborate portfolio revision strategies. | 10 | L2 | CO4 | | | | | | | | | | | | | | | | | | | | |
| Q.8 | <p>CASE STUDY : Compulsory</p> <p>The returns of two assets under four possible states of nature are given below :</p> <table><tr><td>State of nature</td><td>Probability</td><td>Return on Asset 1 in %</td><td>Return on Asset 2 in %</td></tr><tr><td>1</td><td>0.10</td><td>5</td><td>0</td></tr><tr><td>2</td><td>0.30</td><td>10</td><td>8</td></tr><tr><td>3</td><td>0.50</td><td>15</td><td>18</td></tr><tr><td>4</td><td>0.10</td><td>20</td><td>26</td></tr></table> <p>i) Determine the expected return on Asset 1 and 2</p> <p>ii) Estimate the standard deviation of the returns on Asset 1 and 2</p> <p>iii) Evaluate a portfolio with a combination of Asset 1 and 2 in terms of return and risk. The portfolio is constructed with a weight of 60% is Asset 1 and 40% in Asset 2.</p> | | State of nature | Probability | Return on Asset 1 in % | Return on Asset 2 in % | 1 | 0.10 | 5 | 0 | 2 | 0.30 | 10 | 8 | 3 | 0.50 | 15 | 18 | 4 | 0.10 | 20 | 26 | 5 5 10 | L5 L5 L5 | CO2 CO2 CO2 |
| State of nature | Probability | Return on Asset 1 in % | Return on Asset 2 in % | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 0.10 | 5 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 0.30 | 10 | 8 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 0.50 | 15 | 18 | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 0.10 | 20 | 26 | | | | | | | | | | | | | | | | | | | | | | |