



Third Semester MBA Degree Examination, Dec.2024/Jan.2025

Security Analysis and Portfolio Management

Max. Marks: 100

Note: 1. Answer any FOUR full questions from Q.No.1 to Q.No.7.

2. Question No. 8 is compulsory.

3. M : Marks , L: Bloom's level , C: Course outcomes.

		M	L	C													
Q.1	a.	What are derivatives? Give example.	3	L1	CO1												
	b.	Distinguish between investment and speculation.	7	L1	CO4												
	c.	Describe the instruments of money market.	10	L1	CO6												
Q.2	a.	Define the concept of Return and Risk.	3	L2	CO1												
	b.	From the given information calculate Return of portfolio and Risk of portfolio. <table><tr><td></td><td>Security A</td><td>Security B</td></tr><tr><td>Returns</td><td>12 %</td><td>15%</td></tr><tr><td>Weights</td><td>70 %</td><td>30 %</td></tr><tr><td>S.D</td><td>0.1</td><td>0.2</td></tr></table> r A.B (Correlation co-efficient) = 0.5		Security A	Security B	Returns	12 %	15%	Weights	70 %	30 %	S.D	0.1	0.2	7	L2	CO4
	Security A	Security B															
Returns	12 %	15%															
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	c.	The probability distribution of ABB stock is given below : <table><tr><td>State of Economy</td><td>Probability</td><td>Rate of Return %</td></tr><tr><td>Boom</td><td>0.3</td><td>16</td></tr><tr><td>Normal</td><td>0.5</td><td>11</td></tr><tr><td>Recession</td><td>0.2</td><td>06</td></tr></table> Compute Expected Return and Standard deviation.	State of Economy	Probability	Rate of Return %	Boom	0.3	16	Normal	0.5	11	Recession	0.2	06	10	L2	CO4
State of Economy	Probability	Rate of Return %															
Boom	0.3	16															
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Q.3	a.	Compute current price of a preference share if dividend rate is 18% on 100 rupees par value and expected rate of return is 10%.	3	L2	CO3												
	b.	The earning of ABC Ltd. is expected to grow at 6% per annum. The dividend expected on the share is Rupees 2. What is the price of Equity share if IRR is 14%.	7	L2	CO3												
	c.	Calculate the Macauley duration and price of the bond. If face value of bond is Rs.100 coupon is 15%, Time of maturity is 6 years and yield is 18%.	10	L2	CO3												
Q.4	a.	Explain any four oscillators?	3	L3	CO5												
	b.	What is Efficient Market Hypothesis? Mention the assumptions of Efficient Market Hypothesis.	7	L3	CO1												
	c.	Explain Fundamental Analysis.	10	L3	CO5												

Q.5	a.	Explain Markowitz Model in brief.	3	L3	CO5																												
	b.	Explain efficient frontier with diagram.	7	L3	CO3																												
	c.	From the information given for X and Y companies stock and sensex, calculate the systematic and unsystematic risk for both companies stock. <table border="1"><thead><tr><th></th><th>X stock</th><th>Y stock</th><th>Sensex</th></tr></thead><tbody><tr><td>Average return</td><td>0.15</td><td>0.25</td><td>0.06</td></tr><tr><td>Variance of return</td><td>6.3</td><td>5.86</td><td>2.25</td></tr><tr><td>β</td><td>0.71</td><td>0.27</td><td></td></tr><tr><td>Correlation co-efficient</td><td>0.424</td><td></td><td></td></tr><tr><td>Coefficient of determination (r^2)</td><td>0.18</td><td></td><td></td></tr></tbody></table>		X stock	Y stock	Sensex	Average return	0.15	0.25	0.06	Variance of return	6.3	5.86	2.25	β	0.71	0.27		Correlation co-efficient	0.424			Coefficient of determination (r^2)	0.18			10	L3	CO5				
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Q.6	a.	What is NAV?	3	L4	CO1																												
	b.	Calculate Sharpe's ratio from the following information of two portfolios: <table border="1"><thead><tr><th>Portfolio</th><th>Return of portfolio</th><th>Risk free return</th><th>Portfolio risk</th></tr></thead><tbody><tr><td>A</td><td>32</td><td>19</td><td>21</td></tr><tr><td>B</td><td>28</td><td>19</td><td>19</td></tr></tbody></table>	Portfolio	Return of portfolio	Risk free return	Portfolio risk	A	32	19	21	B	28	19	19	7	L4	CO3																
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B	28	19	19																														
	c.	Explain the different types of mutual funds in India.	10	L4	CO5																												
Q.7	a.	What is Credit Risk?	3	L1	CO1																												
	b.	Explain determinants of Interest Rate.	7	L2	CO5																												
	c.	What is CAPM model? Explain assumptions of CAPM.	10	L3	CO5																												
Q.8		<p>Case Study:</p> <p>Assume you are a portfolio manager based on the following details, determine the securities that are over priced and under priced also suggest the stocks to be purchased using SML.</p> <table border="1"><thead><tr><th>Security</th><th>Actual Return</th><th>β</th><th>σ</th></tr></thead><tbody><tr><td>A</td><td>0.33</td><td>1.7</td><td>0.5</td></tr><tr><td>B</td><td>0.13</td><td>1.4</td><td>0.35</td></tr><tr><td>C</td><td>0.26</td><td>1.1</td><td>0.4</td></tr><tr><td>D</td><td>0.12</td><td>0.95</td><td>0.24</td></tr><tr><td>E</td><td>0.21</td><td>1.05</td><td>0.28</td></tr><tr><td>F</td><td>0.14</td><td>0.7</td><td>0.2</td></tr></tbody></table> <p>Nifty Index 0.13 T. bill rate 0.09</p>	Security	Actual Return	β	σ	A	0.33	1.7	0.5	B	0.13	1.4	0.35	C	0.26	1.1	0.4	D	0.12	0.95	0.24	E	0.21	1.05	0.28	F	0.14	0.7	0.2	20	L3	CO5
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