

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA-SEMESTER-III-EXAMINATION-SUMMER-2025

Subject Code: 4539221

Date: 02/06/2025

Subject Name: Security Analysis and Portfolio Management

Time: 02:30 PM TO 05:30 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q.1	Explain the following concepts: (a) Breadth and depth of market (b) Immunization strategy (c) Advance Decline Line (d) Unique Risk (e) Relative Strength Analysis (f) Forms of EMH (g) PBV-ROE Matrix	14																
Q.2	(a) What do you mean by portfolio management? Explain the portfolio Management Process in detail.	07																
	(b) Why does diversification lead to a reduction in unique risk? Explain with suitable example.	07																
	OR																	
	(b) Discuss the Sharpe Single Index model in Detail. Also compare with the Multi factor Model.	07																
Q.3	(a) What do you understand by Fundamental Analysis? Explain in detail EIC Framework for security selection. Discuss the Macro economic factors of fundamental analysis.	07																
	(b) The Following information is provided regarding the performance of three mutual funds. The risk-free rate is 9%. <table border="1"><thead><tr><th></th><th>Return (Rp)</th><th>S D (σ)</th><th>Beta (β)</th></tr></thead><tbody><tr><td>Birla Advantage</td><td>25.38</td><td>4</td><td>0.23</td></tr><tr><td>Reliance Growth</td><td>25.11</td><td>9.01</td><td>0.56</td></tr><tr><td>SBI Value</td><td>25.01</td><td>3.55</td><td>0.59</td></tr></tbody></table> Analyze the above financial performance of the various mutual funds and rank them as per the Sharpe Measure and Treynor Index. Is there any difference in rank? Comment.		Return (Rp)	S D (σ)	Beta (β)	Birla Advantage	25.38	4	0.23	Reliance Growth	25.11	9.01	0.56	SBI Value	25.01	3.55	0.59	07
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Q.3	(a) Describe the procedure developed by Markowitz for choosing the optimal portfolio of risky assets.	07																
	(b) From the following data compute the return and risk of the two stocks. <table border="1"><thead><tr><th>State of</th><th>Probability</th><th>Return on</th><th>Return on</th></tr></thead><tbody></tbody></table>	State of	Probability	Return on	Return on	07												
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		<table><tr><td>Economy</td><td>(Pi)</td><td>Orlando Utility</td><td>Orlando Technology</td></tr><tr><td>Recession</td><td>0.20</td><td>4%</td><td>-10%</td></tr><tr><td>Normal</td><td>0.50</td><td>10%</td><td>14%</td></tr><tr><td>Boom</td><td>0.30</td><td>14%</td><td>30%</td></tr></table> Analyze the above data of two stocks and comment on which company's stock is riskier.	Economy	(Pi)	Orlando Utility	Orlando Technology	Recession	0.20	4%	-10%	Normal	0.50	10%	14%	Boom	0.30	14%	30%								
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Q.4	(a)	Describe the technical analysis. Discuss various charting and other techniques of technical analysis in detail.			07																					
	(b)	The following table gives an analyst's expected return on two stocks for particular market return <table><tr><td>Market Return</td><td>Aggressive stock</td><td>Defensive stock</td></tr><tr><td>6%</td><td>2%</td><td>8%</td></tr><tr><td>20%</td><td>30%</td><td>16%</td></tr></table> (i) What are the betas of the two stocks? What is the expected return on each stock if the market return is equally likely to be 6% or 20%? (ii) If the risk-free rate is 7% and the market return is equally likely to be 6% or 20% what is the SML? (iii) What are the alphas of the two stocks?			Market Return	Aggressive stock	Defensive stock	6%	2%	8%	20%	30%	16%		07											
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Q.4	(a)	Critically examine the CAPM Model with detailed assumption. Compare and Differentiate CAPM Model APT model.			07																					
	(b)	The following information is available <table><tr><td></td><td>Stock of Mars co.</td><td>Stock of Moon co.</td></tr><tr><td>Expected return</td><td>16%</td><td>12%</td></tr><tr><td>Standard deviation</td><td>5%</td><td>8%</td></tr><tr><td>Coefficient of correlation is</td><td>0.60</td><td>0.60</td></tr></table> (i)What is the covariance between return on stock of Mars Co & Moon company? (ii) What is the expected return and risk of a portfolio in which Stock Mars co. & Moon stock have weights of 0.6 and 0.4				Stock of Mars co.	Stock of Moon co.	Expected return	16%	12%	Standard deviation	5%	8%	Coefficient of correlation is	0.60	0.60		07								
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Q.5		CASE STUDY: The returns of two assets under four possible states of nature are given below: <table><tr><td>State of nature</td><td>Probability</td><td>Return on asset ATG Tyre co.</td><td>Return on asset Zoom Car co.</td></tr><tr><td>Boom</td><td>0.10</td><td>5%</td><td>0%</td></tr><tr><td>Upward</td><td>0.30</td><td>10%</td><td>8%</td></tr><tr><td>Normal</td><td>0.50</td><td>15%</td><td>18%</td></tr><tr><td>Downward</td><td>0.10</td><td>20%</td><td>26%</td></tr></table>			State of nature	Probability	Return on asset ATG Tyre co.	Return on asset Zoom Car co.	Boom	0.10	5%	0%	Upward	0.30	10%	8%	Normal	0.50	15%	18%	Downward	0.10	20%	26%		
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	(a)	Determine the Expected return on above security of ATG tyre and Zoom Car Company. Comment on return of the two stocks.			07																					
	(b)	What is the covariance between the returns on stock of ATG tyre co and Zoom Car Co.?			07																					
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Q.5	(a)	What is the standard deviation of the return on stock of ATG tyre co and Zoom Car Co.?			07																					
	(b)	What is the coefficient of correlation between the returns on ATG tyre co and Zoom Car Co.?			07																					
