

Trim: Sep – Nov 24		
Maximum Marks: 50	Examination: ETE Exam	Date: 16/01/2025      Duration: 3 Hours
Programme code: 01	Class: SY	Semester/Trimester: V
Programme: MBA Minor(Finance)		
College: K. J. Somaiya Institute of Management	Name of the department/Section/Center: Finance & Law	
Course Code: 217P01M537	Name of the Course: Investment Analysis & Management	
Instructions: 1) Q.1 is Compulsory 2) Attempt Any 3 Questions from rest of the questions. 3) If Charts are Attempted, kindly attach charts with main answer sheet.		

Question No.		Max. Marks																																							
Q.1)	Attempt A & B Both	20																																							
A)	<p>The monthly return data for stock TCS and market index for a 12- month period is given in table. Calculate Beta for TCS.</p> <table border="1"> <thead> <tr> <th>Month</th><th>TCS (%)</th><th>Market Index (%)</th></tr> </thead> <tbody> <tr><td>1</td><td>9.43</td><td>7.41</td></tr> <tr><td>2</td><td>0</td><td>-5.33</td></tr> <tr><td>3</td><td>-4.31</td><td>-7.35</td></tr> <tr><td>4</td><td>-18.92</td><td>-14.64</td></tr> <tr><td>5</td><td>-6.65</td><td>1.58</td></tr> <tr><td>6</td><td>26.57</td><td>15.19</td></tr> <tr><td>7</td><td>20</td><td>5.11</td></tr> <tr><td>8</td><td>2.93</td><td>0.76</td></tr> <tr><td>9</td><td>5.2</td><td>-0.97</td></tr> <tr><td>10</td><td>20</td><td>10.44</td></tr> <tr><td>11</td><td>21</td><td>17.47</td></tr> <tr><td>12</td><td>30</td><td>20.15</td></tr> </tbody> </table>	Month	TCS (%)	Market Index (%)	1	9.43	7.41	2	0	-5.33	3	-4.31	-7.35	4	-18.92	-14.64	5	-6.65	1.58	6	26.57	15.19	7	20	5.11	8	2.93	0.76	9	5.2	-0.97	10	20	10.44	11	21	17.47	12	30	20.15	10
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B)	Design a Portfolio for investor whose age is 35 years across asset class and provide justification for the same. (Make your suitable Assumptions for the same).	10																																							
Q.2)	Attempt (Any 2)	10																																							
A)	Describe various characteristic of an industry that an analyst must consider while doing industry analysis for FMCG Sector.	5																																							
B)	Identify Buy and Sell Recommendation using Candle Stick Patten- (1 Candle Stick, 2 Candle Stick and 3 Candle Stick Pattern-One each) and describe the Pattern –Refer Infosys -Chart-1	5																																							
C)	<p>Plot at what price levels you will Buy and Sell stock and Provide Recommendation now along with justification for the same.</p> <p>Using Moving Average &amp; Stochastic. Describe the indicators- Refer TCS - Chart-2</p>	5																																							
Q.3)	Attempt (Any 2)	10																																							

A)	Discuss Efficient Market Hypothesis Theory	5																																			
B)	<div>Consider a portfolio of six securities with the following characteristics:</div> <table><tr><th>Security</th><th>Weighting</th><th><math>\alpha</math></th><th><math>\beta</math></th><th>Residual variance (%) <math>\sigma^2_{ei}</math></th></tr><tr><td>1</td><td>0.1</td><td>-0.28</td><td>0.91</td><td>23</td></tr><tr><td>2</td><td>0.15</td><td>0.76</td><td>0.87</td><td>60</td></tr><tr><td>3</td><td>0.2</td><td>2.52</td><td>1.17</td><td>52</td></tr><tr><td>4</td><td>0.1</td><td>-0.16</td><td>0.97</td><td>86</td></tr><tr><td>5</td><td>0.25</td><td>1.55</td><td>1.07</td><td>67</td></tr><tr><td>6</td><td>0.2</td><td>0.47</td><td>0.86</td><td>82</td></tr></table> <div>Assuming the return on market index to be 14.5% and the standard deviation of return on market index to be 16%, calculate the portfolio return and risk under single index model</div>	Security	Weighting	$\alpha$	$\beta$	Residual variance (%) $\sigma^2_{ei}$	1	0.1	-0.28	0.91	23	2	0.15	0.76	0.87	60	3	0.2	2.52	1.17	52	4	0.1	-0.16	0.97	86	5	0.25	1.55	1.07	67	6	0.2	0.47	0.86	82	5
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C)	Discuss various types of systematic and unsystematic risk?	5																																			
Q.4)	Attempt (Any 2)	10																																			
A)	Discuss the CAPM and its relevant Assumptions	5																																			
B)	<div>The following are the data on Five Mutual Funds</div> <table><tr><th>Fund</th><th>Return (%)</th><th>Standard Deviation (%)</th><th>Beta</th></tr><tr><td>A</td><td>15</td><td>7</td><td>1.25</td></tr><tr><td>B</td><td>18</td><td>10</td><td>0.75</td></tr><tr><td>C</td><td>14</td><td>5</td><td>1.4</td></tr><tr><td>D</td><td>12</td><td>6</td><td>0.98</td></tr><tr><td>E</td><td>16</td><td>9</td><td>1.5</td></tr></table> <div>You are required to Compute and Rank these Portfolio using</div> <div>1) Sharpe method</div> <div>2) Treynor's method</div> <div>Assuming the risk-free rate is 6%</div>	Fund	Return (%)	Standard Deviation (%)	Beta	A	15	7	1.25	B	18	10	0.75	C	14	5	1.4	D	12	6	0.98	E	16	9	1.5	5											
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C)	<div>The following data are available to you as portfolio manager</div> <table><tr><th>Security</th><th>Estimated return (%)</th><th>Beta</th><th>Standard deviation</th></tr><tr><td>Tata Steel</td><td>30</td><td>2</td><td>50</td></tr><tr><td>Tata Motors</td><td>25</td><td>1.5</td><td>40</td></tr><tr><td>Ashok Leyland</td><td>20</td><td>1</td><td>30</td></tr><tr><td>Maruti</td><td>11.5</td><td>0.8</td><td>25</td></tr><tr><td>Eicher Motor</td><td>10</td><td>0.5</td><td>20</td></tr><tr><td>Nifty index</td><td>15</td><td>1</td><td>18</td></tr><tr><td>Govt Security</td><td>7</td><td>0</td><td>0</td></tr></table> <div>In terms of the security market line, which of the securities listed above are underpriced?</div>	Security	Estimated return (%)	Beta	Standard deviation	Tata Steel	30	2	50	Tata Motors	25	1.5	40	Ashok Leyland	20	1	30	Maruti	11.5	0.8	25	Eicher Motor	10	0.5	20	Nifty index	15	1	18	Govt Security	7	0	0	5			
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Q.5)	Attempt (Any 2)	10																																			

A)	Explain Portfolio Revision Process	5																												
B)	Find the portfolio variance of a portfolio consisting of equities, bonds and real estate, if the portfolio weights are 25%, 50% and 25%. The Standard deviations are 0.1689, 0.0716 and 0.0345 respectively. And the correlations are 0.45 for equity and bonds, 0.35 for equities and real estate, and 0.20 for bonds and real estate.	5																												
C)	<p>What is the optimum portfolio in choosing among the following securities and assuming <math>R_f= 5\%</math> and Market Variance = 10 %.</p> <table><tr><th>Security</th><th>Expected Return</th><th>Beta</th><th><math>\sigma^2_{ei}</math></th></tr><tr><td>A</td><td>15</td><td>1</td><td>30</td></tr><tr><td>B</td><td>12</td><td>1.5</td><td>20</td></tr><tr><td>C</td><td>11</td><td>2</td><td>40</td></tr><tr><td>D</td><td>8</td><td>0.8</td><td>10</td></tr><tr><td>E</td><td>9</td><td>1</td><td>20</td></tr><tr><td>F</td><td>14</td><td>1.5</td><td>10</td></tr></table>	Security	Expected Return	Beta	$\sigma^2_{ei}$	A	15	1	30	B	12	1.5	20	C	11	2	40	D	8	0.8	10	E	9	1	20	F	14	1.5	10	5
Security	Expected Return	Beta	$\sigma^2_{ei}$																											
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