

CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

22MBAFM304

Third Semester MBA Degree Examination, Dec.2023/Jan.2024

Security Analysis & Portfolio Management

Time: 3 hrs.

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.
 4. Use of Time Value table is permitted.**

			M	L	C																				
Q.1	a.	Explain S & P BSE sensx.	3	L2	CO1																				
	b.	The returns on securities A and B are given below : <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Probability</th> <th style="width: 20%;">Security A</th> <th style="width: 20%;">Security B</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.5</td> <td style="text-align: center;">4</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">0.4</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">0.1</td> <td style="text-align: center;">0</td> <td style="text-align: center;">3</td> </tr> </tbody> </table> Select the security of your preference. The security has to be selected on the basis of return and risk.	Probability	Security A	Security B	0.5	4	0	0.4	2	3	0.1	0	3	7	L3	CO2								
Probability	Security A	Security B																							
0.5	4	0																							
0.4	2	3																							
0.1	0	3																							
	c.	Explain in detail the investment process.	10	L5	CO1																				
Q.2	a.	A Ltd would pay Rs.2.50 as divided per share for the next year and expected to grow indefinitely at 12% what would be the equity value of the investor require 20% return?	3	L1	CO2																				
	b.	Examine the different forms of market efficiency.	7	L4	CO3																				
	c.	An investor wants to build a portfolio with the following four stocks. With the given details, determine his portfolio return and portfolio variance. The investment is spread equally over the stocks. <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Company</th> <th style="width: 10%;">α</th> <th style="width: 10%;">β</th> <th style="width: 20%;">Residual variance</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">0.17</td> <td style="text-align: center;">0.93</td> <td style="text-align: center;">45.15</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">2.48</td> <td style="text-align: center;">1.37</td> <td style="text-align: center;">132.25</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">1.47</td> <td style="text-align: center;">1.73</td> <td style="text-align: center;">196.28</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">2.52</td> <td style="text-align: center;">1.17</td> <td style="text-align: center;">51.98</td> </tr> </tbody> </table> Market return (R_m) = 11 ; Market return variance = 26	Company	α	β	Residual variance	1	0.17	0.93	45.15	2	2.48	1.37	132.25	3	1.47	1.73	196.28	4	2.52	1.17	51.98	10	L5	CO4
Company	α	β	Residual variance																						
1	0.17	0.93	45.15																						
2	2.48	1.37	132.25																						
3	1.47	1.73	196.28																						
4	2.52	1.17	51.98																						
Q.3	a.	Explain relative strength index.	3	L2	CO3																				
	b.	The current dividend on an equity share of NiBi Ltd is Rs.2/-. NiBi is expected to enjoy an above normal growth rate of 20% for a period of 6 years. Thereafter the growth rate will fall and stabilize at 10%. Equity investors require a return of 15%. Determine the intrinsic value of the equity share of NiBi Ltd.	7	L5	CO2																				
	c.	The following three portfolios provide the particular given below : <table border="1" style="margin: 5px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Portfolio</th> <th style="width: 20%;">Average Annual Returns</th> <th style="width: 15%;">Standard Deviation</th> <th style="width: 10%;">Correlation Coefficient</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">18</td> <td style="text-align: center;">27</td> <td style="text-align: center;">0.8</td> </tr> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">14</td> <td style="text-align: center;">18</td> <td style="text-align: center;">0.6</td> </tr> <tr> <td style="text-align: center;">C</td> <td style="text-align: center;">15</td> <td style="text-align: center;">8</td> <td style="text-align: center;">0.9</td> </tr> <tr> <td style="text-align: center;">Market</td> <td style="text-align: center;">13</td> <td style="text-align: center;">12</td> <td style="text-align: center;">-</td> </tr> </tbody> </table> Risk free rate of interest is 9. (i) Rank these portfolios using sharpe's and Treynor's methods. (ii) Compare both the indices.	Portfolio	Average Annual Returns	Standard Deviation	Correlation Coefficient	A	18	27	0.8	B	14	18	0.6	C	15	8	0.9	Market	13	12	-	10	L5	CO4
Portfolio	Average Annual Returns	Standard Deviation	Correlation Coefficient																						
A	18	27	0.8																						
B	14	18	0.6																						
C	15	8	0.9																						
Market	13	12	-																						

Q.4	a.	Explain constant Rupee Plan.	3	L2	CO4																			
	b.	Explain the attributes that an investor should consider while evaluating an investment.	7	L5	CO1																			
	c.	Nihal is considering the purchase of a bond currently selling at Rs.878.50. The bond has four years to maturity, face value of Rs.1000 and 8% coupon rate. The next annual interest payment is due after one year from today. The required rate of return is 10%. Calculate the intrinsic value of the bond. Should Nihal buy the bond?	10	L5	CO2																			
Q.5	a.	Explain Capital Asset Pricing Model.	3	L2	CO4																			
	b.	Analyse the Macro-economic factors that have a significant bearing on the stock market.	7	L4	CO3																			
	c.	The following information is available for stock A and B. <table border="1" data-bbox="370 667 954 813"> <thead> <tr> <th>Particulars</th> <th>Stock A</th> <th>Stock B</th> </tr> </thead> <tbody> <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 colspan="2">0.60</td> </tr> </tbody> </table> <p>(i) What is the covariance between stock A and B? (ii) Determine the expected return and risk of a portfolio in which A and B have weights of 0.6 and 0.4.</p>	Particulars	Stock A	Stock B	Expected Return	16%	12%	Standard Deviation	15%	8%	Coefficient of correlation	0.60		10	L5	CO2							
Particulars	Stock A	Stock B																						
Expected Return	16%	12%																						
Standard Deviation	15%	8%																						
Coefficient of correlation	0.60																							
Q.6	a.	Explain the different types of risk.	3	L2	CO2																			
	b.	Outline the functions of stock exchange.	7	L2	CO1																			
	c.	The Beta and weights of 4 securities are as follows : <table border="1" data-bbox="370 1070 743 1249"> <thead> <tr> <th>Security</th> <th>Beta</th> <th>Weights %</th> </tr> </thead> <tbody> <tr> <td>Infosys</td> <td>0.89</td> <td>25</td> </tr> <tr> <td>Wipro</td> <td>0.75</td> <td>30</td> </tr> <tr> <td>TCS</td> <td>1.25</td> <td>15</td> </tr> <tr> <td>Inflex</td> <td>0.58</td> <td>30</td> </tr> </tbody> </table> <p>The expected return from the market is 20%. Assuming a risk free rate of 4%. Calculate (i) Expected return for each stock using CAPM. (ii) Portfolio Beta.</p>	Security	Beta	Weights %	Infosys	0.89	25	Wipro	0.75	30	TCS	1.25	15	Inflex	0.58	30	10	L5	CO4				
Security	Beta	Weights %																						
Infosys	0.89	25																						
Wipro	0.75	30																						
TCS	1.25	15																						
Inflex	0.58	30																						
Q.7	a.	Explain APT.	3	L2	CO4																			
	b.	List the advantages of investing in mutual funds.	7	L4	CO4																			
	c.	Following data give the market return and the Sun company scrip return for a particular period. <table border="1" data-bbox="592 1572 1068 1930"> <thead> <tr> <th>Index return (R_m)</th> <th>Scrip Return (R_i)</th> </tr> </thead> <tbody> <tr><td>0.50</td><td>0.30</td></tr> <tr><td>0.60</td><td>0.60</td></tr> <tr><td>0.50</td><td>0.40</td></tr> <tr><td>0.60</td><td>0.50</td></tr> <tr><td>0.80</td><td>0.60</td></tr> <tr><td>0.50</td><td>0.30</td></tr> <tr><td>0.80</td><td>0.70</td></tr> <tr><td>0.40</td><td>0.50</td></tr> <tr><td>0.70</td><td>0.60</td></tr> </tbody> </table> <p>(i) Measure the Beta value of the sun company? (ii) If the market return is 2, what would be the scrip return?</p>	Index return (R _m)	Scrip Return (R _i)	0.50	0.30	0.60	0.60	0.50	0.40	0.60	0.50	0.80	0.60	0.50	0.30	0.80	0.70	0.40	0.50	0.70	0.60	10	L5
Index return (R _m)	Scrip Return (R _i)																							
0.50	0.30																							
0.60	0.60																							
0.50	0.40																							
0.60	0.50																							
0.80	0.60																							
0.50	0.30																							
0.80	0.70																							
0.40	0.50																							
0.70	0.60																							

Q.8	Case Study:																			
	The market information's regarding the following stocks is given in the table :																			
		<table border="1"> <thead> <tr> <th>Stock</th> <th>α</th> <th>β</th> <th>e_i^2</th> </tr> </thead> <tbody> <tr> <td>ABC</td> <td>-0.05</td> <td>1.6</td> <td>0.04</td> </tr> <tr> <td>RSE</td> <td>0.08</td> <td>-0.3</td> <td>0.00</td> </tr> <tr> <td>GIV</td> <td>0.00</td> <td>1.1</td> <td>0.10</td> </tr> </tbody> </table>	Stock	α	β	e_i^2	ABC	-0.05	1.6	0.04	RSE	0.08	-0.3	0.00	GIV	0.00	1.1	0.10		
Stock	α	β	e_i^2																	
ABC	-0.05	1.6	0.04																	
RSE	0.08	-0.3	0.00																	
GIV	0.00	1.1	0.10																	
	(i) If the market index is expected to have a return of 0.20 and a variance of 0.20, which single stock would the investor prefer to own from the risk and return point of view.		15	L5 CO4																
	(ii) Interpret the e_i^2 value and α value of RSE.		05	L5 CO4																
