NAVRACHANA UNIVERSITY
a UGC recognized University

School: School of Business and Law
Program/s: MBA
Year: 2nd **Semester:** 3rd
Examination: End Semester Examination
Examination year: December - 2021

Course Code: FA 308   **Course Name:** Investment Analysis and Portfolio Management
Date: 02/12/2021   **Total Marks:** 40
Time: 08:30 am to 10:30 am   **Total Pages:** 2

Instructions:

→ Write each answer on a new page.
→ Use of a calculator is permitted.
→ Notations have their usual meaning.
→ Advisable to go through the question paper at the start of the exam and attempt those questions first that you are more comfortable with. Present Value tables attached.
→ * COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs *	BTL #
Q.1				
a)	A regular coupon (paid annually) bond with a face value (maturity value) of Rs.100 has a coupon rate of 7% p.a. The maturity of the bond is 5 years. The current yield on the Bond is 9% p.a. If the yield rises to 9.35% what would be the price of the bond at this risen yield?	5	CO5	2,3,4,5
b)	Portfolio 'Q' has a standard deviation of 12% and an expected return of 10%. Portfolio 'R' has a standard deviation of 4% and an expected return of 8%. If the risk free rate is 4%, which out of these two portfolios should be designated as 'Market Portfolio (M)' for the purpose of CML. Justify with relevant calculation.	3	CO2	2,3,4
Q.2				
a)	The beta of a stock is 1.2. The expected return on the market for the coming year is 14% and the Risk Free rate is 4%. If price of the stock currently is Rs.50, what would be the expected price of the stock after a year, assuming the stock is priced according to SML? *(No Dividends are payable during the year)*	5	CO4	2,3,4
b)	A Deep discount bond (Zero coupon bond) has a face value of Rs. 100 and a maturity of 7 years. If the current yield is 7%, what would be Price at which the bond would trade in the market?	3	CO1	2,3,4
Q.3	Risk free rate of return is 7% p.a. The returns generated by BSE Sensex (Market Index) and MS Ltd. for the last four years as follows:	8	CO3	2,3

Year	BSE Sensex Returns (%)	MS Ltd. Returns (%)
1	-3	-5
2	9	10
3	12	14
4	15	20

Calculate the Beta of MSLtd.

Q.4	Options, with same expiry date, on the stock of HVL are available with the following data:
	
	(Figures in Rs.)
	    Call : X = Rs. 200 c= 15 ; Call X = Rs. 250 c = Rs. 13
	    Put : X = Rs. 200 p= 17
	
	Based on the information above:
	
	   i) Form a Long Straddle (1 Mark)
	   ii) Calculate the Final payoff / Net profit of the Long straddle if the stock price of HVL closes at the following at the expiry of the options: (6 Marks)
	         a) Rs. 220
	         b) Rs. 150
	         c) Rs. 200
	   iii) What is the maximum loss per share that the investor in the above-mentioned long straddle can make? (1 mark)
		8	CO6
			,
			CO7
				2, 3, 4	

Q.5	Expected/Mean return and standard deviation of three stocks X, Y, Z are as follows: | Stocks	X	Y	Z
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Expected Return (%)	12	12	12

Std. deviation of returns (%)	8	9	11 |
			
			The coefficient of correlation are $\rho_{XY} = 0.7$, $\rho_{XZ} = -0.2$, $\rho_{YZ} = 0.6$
			An investor is to select between two portfolios :
			   a) 60% of his money in Stock X and Balance in stock Y
			   b) 50% in stock X and 50% in stock Z
			
			Calculate the expected return and the risk for the above mentioned portfolios. Also mention which of the Portfolio's out the above should be selected for investment according to the principles of Portfolio theory (Markowitz) and very briefly (in sentence or two justify your answer based on the calculations.
				8	CO2	2,3,4,5	

***********End of Question Paper***********