Seat No.: ________ Enrolment No.___________

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA - SEMESTER–III • EXAMINATION – SUMMER 2013

Subject Code: 2830203 **Date: 03-06-2013**

Subject Name: Security Analysis and Portfolio Management

Time: 14:30 pm – 17:30 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** The returns of two assets under four possible states of nature are given below. **07**

Situation	Probability	Return on Asset 1	Return on Asset 2
1	0.2	-5%	10%
2	0.3	15%	12%
3	0.4	18%	14%
4	0.1	22%	18%

i.What is the standard deviation of the return on asset 1 and on asset 2?

ii.What is the covariance and correlation coefficient between the return on asset 1 and asset 2?

(b) "The stock market is thronged by investors pursuing diverse investment approaches " in the light of the above statement explain the different approaches for investment decision making. **07**

Q.2 **(a)** The current dividend on an equity share of NC Ltd is Rs.5.The present growth rate is 50% .However , this will decline linearly over a period of 8 years and then stabilise at 10%.What is the intrinsic value of share of NC Ltd, if investor requires a return of 18% from its stock. **07**

(b) What do you understand by efficient market hypothesis? Briefly explain its different forms of efficiency. **07**

OR

(b) Explain what do you understand by Industry Life Cycle? Briefly discuss its different phases with their important features. **07**

Q.3 **(a)** Explain what do you understand by momentum indicators in Technical Analysis. Explain any three of such indicators in details. **07**

(b) i.A particular stock has the variance of its return as 225 and its beta is 0.75 . If the variance of the market return is 144, then you are requested to find the percentage of the stock return not explained by the market index. **07**

ii. If the market is providing a return of 14% and T bill are yielding 6% then according to CAPM which of the following securities are overvalued or undervalued .

Security	Beta	Expected Return
A	1.4	18.2
B	1.2	15.6
C	1.5	19.4
D	1.1	14

OR

Q.3 **(a)** Consider the following information **07**

Investor	Investment Objective
A	Earn a return and can assume the relevant risk
B	can assume a risk upto a variance in return of 250

Further it is gathered that
Risk free rate = 7% , Return on market portfolio = 15% standard deviation in the return on market portfolio = 20%.
Using separation theorem you are required to find
i.Risk level of portfolio constructed by investor A
ii. Expected level of return earned by the portfolio constructed by investor B.

(b) "The Arbitrage Pricing Theory can be used to identify mispriced securities" – Explain the statement in detail. **07**

Q.4 (a) Consider the following table which gives a security analyst's expected return on two stocks **07**

Market Returns	Aggressive Stocks	Defensive Stocks
5%	-2%	6%
25%	38%	12%

i. What are the betas of these two stocks.
ii. What is the expected return of each stock if the market return is equally likely to be 5% or 25%?
iii. What are the alphas of these two stocks?

(b) i Explain what do you understand by YTM and YTC of a bond. **07**
ii.Explain what do you understand by Yield curve and Convexity of a bond ?

OR

Q.4 (a) An insurance company has an obligation to pay Rs.215900 after 10 years .The market interest rate is 8%, so the present value of obligation is Rs.100000.The insurance company's manager wants to fund the obligation with a mix of 6 years zero coupon bond and perpetuities paying annual coupons. In what proportion should he buy these debt instruments. **07**

Q.4 (b) What do you understand by immunization and modified duration related to a Bond? Explain the different properties of duration. **07**

Q.5 (a) Consider the following data for Government securities. **07**

Face Value	Interest rate (%)	Maturity Yrs	Current Price
100000	0	1	91000
100000	10.5	2	99000
100000	11	3	99500
100000	11.5	4	99900

Calculate the forward rates.

(b) What do you understand by Portfolio Revision? Explain in this context the Portfolio Rebalancing and Portfolio Upgrading process. **07**

OR

Q.5 (a) Write short notes on the following and their implications. **07**
i. Sharpe Ratio ii. Treynor Ratio iii. Jensen Measure iv.Net Selectivity

(b) Suppose that there are two independent economic factor F1 and F2.The risk free rate is 6% and all the stocks have independent firm specific components with a standard deviation of 45% The following are well diversified portfolio. **07**

Portfolio	Beta on F1	Beta on F2	Expected Return
A	1.5	2	31%
B	2.2	-0.2	27%

What is the expected return – beta relationship in this economy?

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