Seat No.: ________ Enrolment No.______________

GUJARAT TECHNOLOGICAL UNIVERSITY

M.B.A -IIInd SEMESTER–EXAMINATION – MAY/JUNE- 2012

Subject code: 2830203 Date: 02/06/2012

Subject Name: Security Analysis and Portfolio Management (SAPM)

Time: 02:30 pm – 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.**

Q.1 (a) Explain following Terms: **07**
Margin Trading, Stop-loss order, Preference Share, Mutual Fund, Circuit Breaker, Short Sell, Rolling Settlement

(b) The returns of two assets under four possible states of economy are given below: **07**

State of Economy	Probability	Return on Asset 1	Return on Asset 2
1	0.20	-5%	10%
2	0.30	15%	12%
3	0.40	18%	14%
4	0.10	22%	18%

i) Find the standard deviation of the return on asset 1 and asset 2.
ii) Find the covariance between the returns on assets 1 and asset 2.
iii) Find the coefficient of correlation between the returns on both the assets.

Q.2 (a) Reliance Industries earned the following returns over a five year period: $R_1 = 0.20$, $R_2 = -0.10$, $R_3 = 0.18$, $R_4 = 0.12$ and $R_5 = 0.20$. **07**
Calculate: (a) arithmetic mean return (b) geometric mean return (c) cumulative wealth index (d) standard deviation of returns

(b) What is risk? Explain different kind of risk associated with investments in detail. **07**

OR

(b) Discuss following theories: Expectations Theory, Liquidity Preference Theory, Preferred Habitat Theory **07**

Q.3 (a) Explain Efficient Market Hypothesis in detail. **07**

(b) Complete the balance sheet and sales data using the financial data given below: **07**
Acid-test ratio = 1.2
Debt/Equity ratio = 0.6
Days' sales outstanding in accounts receivable = 40 days (360 days per year)
Total Assets turnover ratio = 1.5
Gross Profit Margin = 20%
Inventory turnover ratio = 5

Balance Sheet			
Equity Capital	50,000	Plant & Equipment	?
Retained Earnings	60,000	Inventories	?
Debt	?	Accounts Receivables	?
-	-	Cash	?
Total	?	Total	?

Sales	?
Cost of Goods Sold	?

OR

Q.3 **(a)** Select an industry of your choice and do the industry analysis in present economic scenario. **07**

(b) Define Technical Analysis. What is the difference between technical analysis and fundamental analysis? Explain different continuation and reversal patterns. **07**

Q.4 **(a)** Given below is the expected returns on two stocks for particular market returns: **07**

Market Return	Aggressive Stock	Defensive Stock
5%	-5%	10%
25%	40%	18%

i) What are the betas of two stocks?
ii) What is the expected return on each stock if the market return is equally likely to be 5% and 25%?
iii) What is SML if the risk free rate is 10%
iv) Find alpha for both the stocks.

(b) Explain Arbitrage Pricing Model. Compare it with CAPM. **07**

OR

Q.4 **(a)** The following information is available: **07**

Expected return for the market = 14%
Standard deviation of market return = 20%
Risk free rate = 6%
Correlation coefficient between stock A and the market = 0.7
Correlation coefficient between stock B and the market = 0.8
Standard Deviation for stock A = 24%
Standard Deviation for stock B = 32%

i) Calculate beta for both the stocks.
ii) Calculate required rate of return for each stock.

(b) Explain Security Market Line using CAPM theory. Also, explain assumptions of CAPM. **07**

Q.5 **(a)** Following bond has been considered by you as a part of your fixed income portfolio: **07**

Coupon Rate: 10%
Yield to Maturity: 10%
Maturity: 10 years

i) Find duration of the bond.
ii) Why the duration of bond is less than its maturity?
iii) What will be the effect of the following changes on the duration of bond:
(1) Coupon rate is 7% rather than 10%
(2) YTM is 13% rather than 10%
(3) Maturity period 8 years rather than 10 years
Consider one change at a time.

(b) Discuss key points of active and passive portfolio strategies. Describe portfolio rebalancing and portfolio upgrading in the context of portfolio revision. **07**

OR

Q.5 **(a)** Rs.1000 par value bond with annual coupon of 10% has a remaining maturity of 4 years. The bond is presently selling for Rs.1020. The reinvestment rate applicable to the future cash inflows of the bond is 9% p.a. What will be the realised YTM? **07**

(b) Consider the following information for three mutual funds A, B and C and the market. **07**

	Mean Return (%)	Standard Deviation (%)	Beta
A	15	20	0.90
B	17	24	1.10
C	19	27	1.20
Market	16	20	1.00

The mean risk free rate = 10%

Calculate Sharpe measure, Jensen measure and Treynor measure for the three mutual funds and the market index.

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