Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.B.A.- SEMESTER – III • EXAMINATION – WINTER 2012

Subject code: 2830203 Date: 26-12-2012

Subject Name: Security Analysis and Portfolio Management (SAPM)

Time: 10:30 pm – 01:30 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)** Consider a portfolio that offers an expected rate of return of 12% and S.D. of 18%. T-bill offers 7%. When we specify utility by $U = E(r) - 0.005A\sigma^2$, what is the utility function for T-bills and the risky portfolio? What is the maximum level of risk aversion (A) in order for which the risky portfolio is still preferred to T-bills? **07**

(b) Consider the following information for three mutual funds, *L*, *M*, and *N*, and the market. **07**

	Mean return (%)	*Standard deviation (%)*
L	15	20
M	12	11
N	18	15
Market index	13	14

The mean risk-free rate was 8 percent. Calculate the Treynor measure, Sharpe measure, Jensen measure for the three mutual funds and the market index

Q.2 **(a)** How economic analysis does helps in Investment Decision? **07**

(b) "Diversification reduces risk" Do you agree? Why? **07**

OR

(b) Discuss the major types of continuation and reversal patterns with reference to technical analysis **07**

Q.3 **(a)** The cash flow data of Ankit Ltd. for the year ended March 31, 2012 are as follows: **07**

Cash payments of dividends: 35000, Purchase of Land: 14000, Cash payments for interest: 10000, Cash payment for salaries: 45000, Sale of equipment: 38000, Retirement of common stock: 25000, Purchase of equipment: 30000, Cash payments to suppliers: 85000, Cash collections from customers: 250000, Cash at the beginning of the year: 50000

You are required to prepare a statement of cash flows showing net cash provided by Operating, Investing and Financing activities.

Discuss from the analyst's point of view, the purpose of classifying cash flows into three categories mentioned above.

(b) Explain the CAPM model and also state its underlying assumptions **07**

OR

Q.3 **(a)** The probability distribution of the rate of return on a stock is given below: **07**

State of the Economy	*Probability of Occurrence*	*Rate of Return*
Boom	0.20	30 %
Normal	0.50	18 %
Recession	0.30	9 %

What is the standard deviation of return?

(b) Explain the Sharpe Index Model and show its superiority over Markovitz Model for portfolio optimization. **07**

Q.4 **(a)** What is Duration? Explain the eight rules of Duration **07**

(b) The risk-free return is 7 percent and the return on market portfolio is 13 percent. Stock P's beta is 0.8; its dividends and earnings are expected to grow at the constant rate of 5 percent. If the previous dividend per share of stock P was Rs.1.00, what should be the intrinsic value per share of stock P? **07**

OR

Q.4 **(a)** Choose an Industry and identify the factors that will determine its performance in next three years **07**

Q.4 **(b)** A zero coupon bond of Rs 100,000 has a term to maturity of six years and a market yield of 8 percent at the time of issue. **07**

(a) What is the issue price?
(b) What is the duration of the bond?
(c) What is the modified duration of the bond?
(d) What will be the percentage change in the price of the bond, if the yield declines by 0.3 percentage points (30 basis points)

Q.5 **(a)** Explain three forms of Efficient market hypothesis **07**

(b) The following information is available. **07**

	Stock A	Stock B
Expected return	24%	35%
Standard deviation	12%	18%
Coefficient of correlation	0.60	

a.What is the covariance between stocks *A* and *B* ?
b.What is the expected return and risk of a portfolio in which *A* and *B* are equally weighted?

Q.5 **(a)** Explain the relationship between Bond price, yield and terms to maturity. **07**

(b) The following table, gives the rate of return on stock of Apple Computers and on the market portfolio for five years **07**

Year	*Return on the stock Apple Computers* (%)	*Return Market Portfolio*(%)
1	-13	-3
2	5	2
3	15	8
4	27	12
5	10	7

(i) What is the beta of the stock of Apple Computers?
(ii) Establish the characteristic line for the stock of Apple Computers.

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