Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.B.A. Sem. – III - Examination –June- 2011

Subject code: 830203

Subject Name: Security Analysis and Portfolio Management

Date:14/06/2011 **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)** Define Investment. Explain different Investment Alternatives. **07**

(b) Discuss why international diversification reduces portfolio risk. Specifically, why would you expect low correlation in the rates of return for domestic and foreign securities? **07**

Q.2 **(a)** Briefly Explain types of Market order. **07**

(b) The following are the monthly rates of return for Rally Software Corp. and for Carry Electric during a six-month period. **07**

Month	Rally Software	Carry Electric
1	-0.04	0.07
2	0.06	-0.02
3	-0.07	-0.10
4	0.12	0.15
5	-0.02	-0.06
6	0.05	0.02

Compute the following:
a. Expected monthly rate of return [$E(Ri)$] for each stock
b. Standard deviation of returns for each stock
c. The covariance between the rates of return
d. The correlation coefficient between the rates of return
What level of correlation did you expect? How did your expectations compare with the computed correlation? Would these two stocks offer a good chance for diversification? Why or why not?

OR

(b) Explain the shape of the efficient frontier. **07**

Q.3 **(a)** You are considering two assets with the following characteristics: **07**

$E(R1) = 0.15$ $\sigma_1 = 0.10$ $W_1 = 0.5$

$E(R2) = 0.20$ $\sigma_2 = 0.20$ $W_2 = 0.5$

Compute the mean and standard deviation of two portfolios if $r_{1,2} = 0.40$ and –0.60, respectively. Plot the two portfolios on a risk-return graph and briefly explain the results.

(b) The capital asset pricing model (CAPM) contends that there is systematic and unsystematic risk for an individual security. Which is the relevant risk variable and why is it relevant? Why is the other risk variable not relevant? **07**

OR

Q.3 **(a)** General Can Company's (GCC) latest annual dividend of Rs. 1.25 a share was paid yesterday and maintained its historic 7 percent annual rate of growth. You plan to purchase the stock today because you believe that the dividend growth rate will increase to 8 percent for the next three years and the selling price of the stock will be Rs. 40 per share at the end of that time. **07**

a. How much should you be willing to pay for the GCC stock if you require a 12 percent return?

b. What is the maximum price you should be willing to pay for the GCC stock if you believe that the 8 percent growth rate can be maintained indefinitely and you require a 12 percent return?

c. If the 8 percent rate of growth is achieved, what will the price be at the end of Year 3, assuming the conditions in Part b?

(b) Explain the EIC Framework and its implications. **07**

Q.4 **(a)** Explain the difference between Forward and Future Contracts. **07**

(b) Why would you expect a relationship between economic activity and stock price movements? **07**

OR

Q.4 **(a)** You strongly believe that the price of Bright Corp. stock will rise substantially from its current level of Rs.137, and you are considering buying shares in the company. You currently have Rs. 13,700 to invest. As an alternative to purchasing the stock itself, you are also considering buying call options on Bright's stock that expire in three months and have an exercise price of Rs. 140. These call options cost Rs. 10 each. **07**

a. Compare and contrast the size of the potential payoff and the risk involved in each of these alternatives.

b. Calculate the three-month rate of return on both strategies assuming that at the option expiration date Bright's stock price has (1) increased to Rs. 155 or (2) decreased to Rs. 135.

c. At what stock price level will the person who sells you the Bright Corp. call option break even? Can you determine the maximum loss that the call option seller may suffer, assuming that he does not already own Bright Corp. stock?

(b) What do you mean by Efficient Market Hypothesis, Also Explain the forms of Market Efficiency. **07**

Q.5 **(a)** An analyst wants to evaluate Portfolio X, consisting entirely of Indian common stocks, using both the Treynor and Sharpe measures of portfolio performance. The following table provides the average annual rate of return for Portfolio X, the market portfolio (as measured by the BSE Sensex), and Indian Treasury bills (T-bills) during the past eight years. **07**

Particulars	Annual Average Rate of Return	Standard Deviation of Return	Beta
Portfolio X	10%	18%	0.6
BSE Sensex	12%	13%	1
T-bills	6%	n/a	n/a

n/a = not applicable

a. Calculate both the Treynor measure and the Sharpe measure for both Portfolio X and the Sensex. Briefly explain whether Portfolio X underperformed, equaled, or outperformed the Sensex on a risk-adjusted basis using both the Treynor measure and the Sharpe measure.

b. Based on the performance of Portfolio X relative to the Sensex calculated in Part a, briefly explain the reason for the conflicting results when using the Treynor measure versus the Sharpe measure.

(b) Technical Analysts believe that one can use past price changes to predict future price changes. How do they justify this belief? **07**

OR

Q.5 **(a)** Describe the Dow Theory and its three components. Which component is most important? What is the reason for an intermediate reversal? **07**

(b) The following portfolios are being considered for investment. During the period under consideration, *RFR* = 0.07. **07**

Portfolio	Return	Beta	σ_i
P	0.15	1	0.05
Q	0.2	1.5	0.1
R	0.1	0.6	0.03
S	0.17	1.1	0.06
Market	0.13	1	0.04

a. Compute the Sharpe measure for each portfolio and the market portfolio.
b. Compute the Treynor measure for each portfolio and the market portfolio.
c. Rank the portfolios using each measure, explaining the cause for any differences you find in the rankings.

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