LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.A. DEGREE EXAMINATION – **ECONOMICS**

FOURTH SEMESTER – **APRIL 2016**

EC 4813 - PORTFOLIO THEORY AND INVESTMENT ANALYSIS

Date: 21-04-2016 Dept. No. Max. : 100 Marks
Time: 09:00-12:00

Part – A

Answer any FIVE questions in about 75 words each. (5 x 4 = 20 marks)

1. What is Money Market? What are the important functions performed by it?
2. Write a short note on OTC trading.
3. State the assumptions underlying the Black-Scholes model.
4. Distinguish between the open-end and closed-end mutual funds?
5. Define risk and distinguish between systematic and unsystematic risk?
6. Suppose ABC co., stock pays three annual dividends of Rs. 10, Rs. 20, and Rs. 30 in year 1, 2 and 3 respectively, and the discounted rate is 10 percent. What is the present value (V_0) of the stock?
7. Stocks Y and Z have the following parameters.

	Stock Y	Stock X
Expected Return	30	30
Expected variance	16	25
Covariance of YX	20	

Is there any advantage of holding a combination of Y and Z?

Part – B

Answer any FOUR questions in about 300 words each. (4 x 10 = 40 marks)

8. Briefly explain the various types of bonds and risk associated with the investments in bonds.
9. Discuss in detail the nature of equity shares and dividend policy of a firm.
10. Critically examine the Binomial model of option valuation.
11. What are the advantages of APT over CAPM? Explain in detail.
12. Explain the Jensen index of portfolio performance.
13. The expected rates of return and possibilities of their occurrence for Alpha company and Beta company scrips are given below

Probability of occurrence	Returns on Alpha's Scrip	Return on Beta's Scrip
0.05	-2.0	-3.0
0.20	-9.0	6.0
0.50	12.0	11.0
0.20	15.0	14.0
0.05	26.0	19.0

a) Find out the expected rates of return for Alpha and Beta scrips
b) If an investor invests equal proportion on both the scrips what would be the return?
c) If the proportion is changed to 25% and 75% and then to 75% and 25% what would be the expected rates of return?

14. The following are the information extracted from the returns on the portfolio of three mutual funds, A, B and C.

	Fund A	Fund B	Fund C	Return on Market	Risk free return
Mean Return	17.1	14.5	13.0	11	8.6
Standard Deviation	28.1	19.7	22.8	20.5	-
Beta	1.20	0.92	1.04	1.00	-

Compute Sharpe, Treynor, Jensen and M^2 measures.

Part – C

Answer any TWO questions in about 1200 words each. (2 x 20 = 40 marks)

15. Discuss in detail the financial market regulations introduced in India.
16. Derive the efficient portfolio using utility curves and explain what will happen to the portfolio if the investor invests part of his money on risk free asset and the remaining amount on the risky asset?
17. Anand is considering the purchase of three securities A, B and C for the next years. The returns of the securities depend on the next years state of the stock market. The estimated rates of returns are shown in the table.

State of market	Probability of occurrence	Rates of return of securities		
		A	B	C
Recession	0.25	10%	9%	14%
Average	0.50	14%	13%	12%
Boom	0.25	16%	18%	10%

a) Find each stocks expected rate of return, standard deviation and coefficient of variation
b) Apply mean, variance criterion to the alternative investments
c) If Anand invest one third on each security what would be his portfolio return?
d) What are the covariance's between security A and B, B and C and A and C?
e) If equal amount of fund are invested in these securities, what will be portfolio risk?

18. Mr. David is constructing an optimum portfolio. The market return forecast says that it would be 13.5 percent for the next two years with the market variance of 10 percent. The risk less rate of return is 5 percent. The following securities are under review.

Company	α	B	σ^2_{ei}
A	3.72	0.99	9.35
B	0.60	1.27	5.92
C	0.41	0.96	9.79
D	-0.22	1.21	5.39
E	0.45	0.75	4.52

a) Find out the optimum portfolio assuming no short sale.
b) What are the stocks to be held long and short assuming short sales?

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