PG – 876

IV Semester M.B.A. Degree Examination, July 2017
(CBCS)
MANAGEMENT
4.2.1 : Investment Analysis and Management

Time : 3 Hours Max. Marks : 70

Instruction : *Answer* ***all*** *the Sections.*

SECTION – A

Answer **any five** of the following questions. **Each** question carries **five** marks. **(5x5=25)**

1. What is 'Investment' ? How is it different from Speculation and Gambling ?

2. Briefly explain Dow theory.

3. Distinguish between CML and SML as per CAPM.

4. The estimated factor sensitivities of TEC to the five macro-economic factors are given in the table below. The table gives the market risk premium to each of these factors.

	Factory Sensitivity	**Risk Premium (%)**
Confidence Risk	0.25	2.59
Time horizon Risk	0.30	– 0.66
Inflation Risk	– 0.45	– 4.32
Business-cycle Risk	1.60	1.49
Market-timing Risk	0.80	3.61

Use the APT model to calculate the required rate of return for TEC using these estimates. The treasury bill rate is 4.1 per cent.

P.T.O.

5. A stock costing Rs. 150 pays no dividends. The possible prices at which the stock may be sold for at the end of the year with the respective probabilities are :

Price	Probabilities
130	0.2
150	0.1
160	0.1
165	0.3
175	0.1
180	0.2

You are required to :

i) Calculate the Expected Return

ii) Calculate the Standard Deviation of Returns.

6. At present suppose R_f is 10% and the expected return on the market portfolio is 15%. The expected returns for four stocks are listed together with their expected betas.

Stock	Expected Return	B
Hindustan Zinc	17.0%	1.3
Asian Paints	14.5%	0.8
Maruti Udyog Ltd.,	15.5%	1.1
Purvi Electronics	18.0%	1.7

On the basis of these expectations, which stocks are overvalued and which are undervalued ? Assume assumptions of CAPM hold true.

7. The following are the data on five mutual funds :

Funds	Return	Standard Deviation	Beta
A	15	7	1.25
B	18	10	0.75
C	14	5	1.40
D	12	6	0.98
E	16	9	1.50

You are required to compute Reward to Volatility Ratio and rank these portfolios using :

- Sharpe Method and
- Treynor's Method

assuming the risk free rate is 6%.

SECTION – B

Answer **any three** questions. **Each** question carries **ten** marks : (3x10=30)

8. Explain in detail, the process for making and managing investments.

9. Explain in detail the concept of 'Efficient Market Hypothesis'. On what basis are the different forms of efficiency in markets are identified ?

10. The common stocks of Bajaj and TVS have expected returns of 15% and 20% respectively, while the standard deviations are 20% and 40%. The expected correlation co-efficient between the two stocks is 0.36. What is the expected value of return and the standard deviation of a portfolio consisting of (a) 40% Bajaj and 60% TVS ? (b) 40% TVS and 60% Bajaj ? Under both cases, in what direction should the correlation co-efficient move to bring the portfolio risk still lower ?

11. Mr. Suresh is constructing an optimum portfolio. The market return forecast says that it would be 15.5% for the next two years with the market variance of 12%. The risk-free rate of return is 5%. The following securities are under review. Find out the optimum portfolio.

Company	α	β	[illegible]
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

SECTION – C

12. **Compulsory** Question : (1x15=15)

Case Study :

You have recently graduated as a major in finance and have been hired as a financial planner by Radiant Securities, a financial services company. Your boss has assigned you the task of investing Rs. 1,000,000 for a client who has a 1-year investment horizon. You have been asked to consider only the following investment alternatives : T-bills, stock A, stock B, stock C and market index.

The economics cell of Radiant Securities has developed the probability distribution for the state of the economy and the equity researchers of Radiant Securities have estimated the rates of return under each state of the economy. You have gathered the following information from them :

Returns on Alternative Investments

State of the Economy	Probability	T-Bills	Stock A	Stock B	Stock C	Market Portfolio
• Recession	0.2	6.0%	(15.0%)	30.0%	(5.0%)	(10.0%)
• Normal	0.5	6.0	20.0	5.0	15.0	16.0
• Boom	0.3	6.0	40.0	(15.0)	25.0	30.0

Your client is a very curious investor who has heard a lot relating to portfolio theory and asset pricing theory. He requests you to answer the following questions :

a) What is the expected return and the standard deviation of return for stocks A, B, C and the market portfolio ?

b) What is the covariance between the returns on A and B ? Returns on A and C ?

c) What is the coefficient of correlation between the returns on A and B ? Returns on A and C ?

d) What is the expected return and standard deviation on a portfolio in which stocks A and B are equally weighted ? In which the weights assigned to stocks A, B and C are 0.4, 0.4, and 0.2 respectively ?

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SECTION – A

Answer **any five** questions. **Each** question carries **five** marks : **(5×5=25)**

1. Distinguish between investments and speculation.

2. What is efficient market hypothesis ?

3. Discuss various types of risk with example.

4. Sekhar has a portfolio of five stocks with the following expected market value and returns.

Stocks	Market value	Return
A	20,000	10%
B	25,000	18%
C	30,000	15%
D	1,00,000	12%
E	1,000	8%
	1,76,000	

Determine their expected return.

P.T.O.

5. Mr. Arjunan received a bonus of Rs. 50,000 from his company. He wants to invest the money in two stocks. After a careful study of the stocks market he selected Rock and Reed Corporations The expected return in Rock(S) is 14 percent and standard deviation of return is 22 percent. The return from the Read Corp(G) is slightly higher being 16 percent and at the same time the standard deviation of return is also higher being 25 percent. The correlation coefficient between them is 0.5. Help him to build a minimum risk portfolio.

6. The X/Y Company stock's return depends heavily on the market return, the beta being 1.4, the risk free rate of return is 8 percent and the Market return is 15 percent.

   a) Determine the expected return for XY stock.

   b) What happens to expected return, if the market return increases to 20 percent ?

   c) What happens to the return if beta falls to .90 while the other inputs remain the same ?

7. Describe the CAPM model. Give the significance of SML and CML.

SECTION – B

Answer **any three** questions. **Each** question carries **ten** marks : **(3×10=30)**

8. Explain the Markowitz model of portfolio analysis and selection.

9. Distinguish between Fundamental analysis and Technical analysis.

10. Sun Rise Company manages two mutual funds. The funds are Index Fund and Equity Fund. The data below provide the key statistical information.

	Return per cent	Risk	Beta	r
Equity Fund	19	18	1.49	.83
Index Fund	13	16	1.08	.68
Market	14	10	1.0	1.00
R_f	5			

   a) According to Jensen method which fund performs well.

   b) In your opinion, which fund consists more of systematic risk.

   c) What is the meaning of alpha in Jensen method ?

11. Determine the relationship between assets R and S return with the following data :

Probability of occurrence	Annual Returns	
	R	S
0.2	– 8	– 9
0.4	12	– 4
0.3	– 6	10
0.1	9	– 11

SECTION – C

Case study : **(1×15=15)**

12. A portfolio manager has got the following information about several stocks. He has to build a optimum portfolio for his client without short sales :

Security	Expected return	β	σ^2_{ei}
A	22	1.0	35
B	20	2.5	30
C	14	1.5	25
D	18	1.0	80
E	16	0.8	20
F	12	1.2	10
G	19	1.6	25
H	17	2.6	30

The market index variance is 12 percent and the risk free rate of return is 7 percent.