MID-WESTERN UNIVERSITY
FACULTY OF MANAGEMENT
FINAL EXAMINATION: 2072
MASTER OF BUSINESS ADMINISTRATION (MBA)
SEMESTER - IV

Subject: Security Analysis & Portfolio Management	Course Code: MGMT 548
Full Marks: 100	Time: 4 Hours

SECTION B: SHORT ANSWER QUESTIONS (5X6=30)

Attempt any **FIVE** Questions.

1. What do you mean by investment? State the different investment alternatives available to investor and explain any four of them that are available to Nepalese investor. 2+4

2. An analyst expects a risk-free return of 4.5 percent, a market return of 14.5 percent, and the returns for Intel Stock are shown in the following table.

   STOCK INFORMATION

Stock	Beta Coefficient
Intel	1.2

   a. Is Intel stock classified as an aggressive or defensive assets and why? 1
   b. Specify the equation for Security market line (SML). 1
   c. What is the equilibrium required rate of return for Intel stock? 1
   d. Show on the graph:
   i) Where Intel stock would plot on the security market line (SML) if they were fairly valued using the capital asset pricing model (CAPM)? 2
   ii) State whether Intel stock undervalued or overvalued if the independently estimated expected return for Intel stock is 16%, analyst uses the SML for strategic investment decisions. 1

3. Define a primary and secondary market for securities and discuss how they differ. 6

4. Gerald Jones is considering to purchase a 10 percent coupon annual bond of the Farr Corporation at par value which had 10 years to maturity
   i) What is the value of bond today, if the market interest rate of similar type of bond is 12%? What will be your suggestion to Jones? 2
   ii) What is the value of bond today, if the market interest rate of similar type of bond is 8%? What will be your suggestion to Jones? 2
   iii) Why the trading decision is found different in part i) and ii). Explain 1
   iv) Assume that the US treasury issued a bond that pays coupons of 10% annually for 10 years. What will be this bond's Macaulay's Duration? 2

5. An investor has Rs. 1,000 to use in purchasing shares of a fund and is considering the following funds all of which the same Net Asset Value (NAV) of Rs. 10 per share. Closed end fund E is selling for a market price that equal it's NAV, while closed end fund D is selling at a 20% discount or Rs. 8; the broker charges a commission equal to 2% of the market price for each share purchased. Mutual fund N is a no load fund, while mutual fund L, charged an 8.5% load. How many shares does the investor end up with in each case? 6

6. Briefly explain the concept of the efficient market hypothesis (EMH) and also comment each of its three forms. 2+4

7. Write Short Notes (On any two) 3+3
   a. Capital Market Line
   b. Active management
   c. Online trading

SECTION C: LONG ANSWER QUESTIONS (2X15=30)

Attempt any **TWO** questions.

8. "Fundamental analysis examines the economic environment, the industry performance and the company performance to suggest the intrinsic value before making an investment decision." Explain. 15

9. Assume that a two factor model is descriptive of reality and determine the equation that describes the equilibrium return for the following there portfolios:

Portfolios	Expected return E (R $_i$)	b_{i1}	b_{i2}
A	13%	2	0.2
B	12%	3	-0.4
C	10%	1	0.4

Likely, it is assumed that portfolio E exists with the following risk return characteristics:

Portfolios	Expected return E (R $_i$)	b_{i1}	b_{i2}
E	16%	2	-0.25

Show how an investor could take advantage of the arbitrage opportunities that exist here by constructing a new portfolio called Z that is composed of some to be determined proportions of portfolios A and B. If an investor invests Rs. 100,000 of portfolio Z and engages in arbitrage, what riskless gain will they earn? 15

10. You have been assigned the task of comparing the investment performance of four different pension fund managers. After gathering 60 months of returns, you have prepared the following summary of the data, for each of the pension fund managers.

Portfolio	Return	Beta	Standard deviation
A	7	1	5
B	10	1.5	10
C	13	0.6	3
D	15	1.1	6

During the period under consideration, Risk Free Rate of return is considered to be 5% and market rate of return is 12%.

i) Compute the Sharpe Measure for each portfolio. 4
ii) Which of the portfolios performed the best according to Sharpe's measure? Rank 2
iii) Draw graphs to illustrate the work for Sharpe's measure. 2

B) Gentry Can Company's (GCC) latest annual dividend of $1.25 a share was paid yesterday and maintained its historic 10 percent annual rate of growth. You plan to purchase the stock today because you believe that the dividend growth rate will remain 10 percent forever and the selling price of the stock is $40 per share.

a. How much should you be willing to pay for the GCC stock if you require a 12 percent return? 2

c. If the 10 percent rate of growth is achieved forever, what will the price be at the end of Year 5, assuming the conditions in Part a? 2

b. What is the maximum price you should be willing to pay for the GCC stock if you believe that the 10 percent growth rate can be for only 3 year and then maintained 5 percent indefinitely and you require a 12 percent return? 3

SECTION D: CASE STUDY (20)

11. Read the following case and answer the following questions.

Assume that you recently graduated with a major in finance, and you just landed a job as a financial planner with Merrill Finch Inc., a large financial services corporation.

Your first assignment is to invest $100,000 for a client. Because the funds are to be invested in a business at the end of 1 year, you have been instructed to plan for a 1-year holding period. Further, your boss has restricted you to the following investment alternatives in the table below, shown with their probabilities and associated outcomes.

Merrill Finch's economic forecasting staff has developed probability estimates for the state of the economy, and its security analysts have developed a sophisticated computer program, which was used to estimate the rate of return on each alternative under each state of the economy. High Tech Inc. is an electronics firm; Collections Inc. collects past-due debts; and U.S. Rubber manufactures tires and various

other rubber and plastics products. Merrill Finch also maintains a "market portfolio" that owns a market-weighted fraction of all publicly traded stocks; you can invest in that portfolio, and thus obtain average stock market results. Given the situation as described, answer the following questions.

State of economy	Probability	T bills (%)	High Tech (%)	Collections (%)	U.S. Rubber (%)	Market Portfolio (%)
Recession	0.1	8	-22%	28	10	-13
Below average	0.2	8	-2%	14.7	-10	1
Average	0.4	8	20	0	7	15
Above average	0.2	8	35	- 10	45	29
Boom	0.1	8	50	- 20	30	43
Expected Return $E(R_J)$		8			13.8%	15%
Standard Deviation (σ_J)		0			18.8%	15.3%
Beta (β_J)		0		-0.87	0.89	

a. Which alternative provides higher expected return?   3
b. Which alternative is least risky in terms of standard deviation?   3
c. Which alternative is most risky in terms of beta?   4
c. Suppose you created a 2-stock portfolio by investing $50,000 in High Tech and $50,000 in Collections.
    1. Calculate the expected return, the standard deviation and beta for this portfolio.   6
    2. How is the riskiness of this 2-stock portfolio compared with the riskiness of the individual stocks if they were held in isolation?   2
    3. Why do we calculate beta when risk can be measured by standard deviation? Explain.   2