(2 ½ Hours) **Total Marks: 75**

NB: (1) **All** questions are **compulsory**.
(2) **All** working notes should form a **part** of your answer.
(3) Specify **assumptions**, if any, while **solving** the questions.
(4) **Figures** to the **right** indicate **full** marks.

(1) **(a)** Match the following. (Any 8) **(8)**

Column A		**Column B**	
1	Treynor's measure	A	Systematic risk
2	Standard deviation	B	Unsystematic risk
3	Sharpe's measure	C	Highly rigid
4	Inflation risk	D	Beta
5	Range	E	Chance of loss
6	Formula plans	F	Standard deviation
7	Risk	G	Difference between highest and lowest value
8	Default risk	H	Bankruptcy
9	Principle of portfolio construction	I	Holding period return / period of holding
10	Annualized return	J	Safety

(1) (b) State whether following statements are True or False. (Any 7) **(7)**

1. The random walk theory states that market and security prices are random and not influenced by past events.
2. Diversification helps to reduce the unsystematic risk.
3. The total return on a portfolio includes only risk free return.
4. Efficient market hypothesis presumes that there are less number of buyers and sellers.
5. Systematic risk arises due to micro economic factors.
6. Portfolio revision involves changing the existing mix of securities.
7. Holding period return and annualized return are always the same.
8. The objective of portfolio management is to maximize both risk and return.
9. Mutual fund is a tax saving investment.
10. Higher the variance of a security, higher is the risk.

(2) The rate of return on stock M and stock N under different state of economy are given below: **(15)**

State of Economy	**Probability**	**Stock X (%)**	**Stock Y (%)**
Boom	0.3	25	45
Normal	0.5	35	35
Recession	0.2	45	25

Calculate the expected return and standard deviation of return on stock M and stock N. Which stock is a better investment option? and why?

OR

(2) **(a)** Define Investment ? Explain the various constraints of investments. **(8)**
(b) Explain Efficient Market Hypothesis. **(7)**

(3) In January 2001, Mr. Bhandari purchased the following 5 scrips: **(15)**

Co.'s Name	No. of Shares	Purchase Price
A Ltd.	400	500
B Ltd.	400	360
C Ltd.	400	160
D Ltd.	400	480
E Ltd.	400	520

He paid brokerage of Rs. 3000. During the year 2001, Mr. Bhandari received the following:

Co.'s Name	Dividend	Bonus Shares
A Ltd.	600	1:2
B Ltd.	580	
C Ltd.	900	
D Ltd.	1000	
E Ltd.	1200	

In January 2002, Mr. Bhandari sold all his holdings at the following prices.

Co.'s Name	Market Price
A Ltd.	550
B Ltd.	480
C Ltd.	216
D Ltd.	400
E Ltd.	800

He paid brokerage of Rs. 3,730. Calculate the holding period return.

OR

(3)(a) Mr. Ashok purchased 10 shares of ACC Ltd. four years ago at Rs. 50 each. The company paid the following dividends. **(8)**

	Year 1	Year 2	Year 3	Year 4
Dividend per Share (Rs.)	2	2	2.5	3
Dividend Amount (Rs.)	20	20	25	30

The current price of the share is Rs. 60. What rate of return has he earned on his investment if he sells the shares now?

(3)(b) From the following information calculate the Beta of a security. **(7)**

Year	Return on security (%)	Return on market portfolio (%)
1	30	36
2	36	33
3	45	42
4	30	36
5	24	33

(4) The details of three portfolios are given below. You are required to rank these portfolios according to Sharpe, Jensen and Treynor's measures, Risk free rate of return is 9%. **(15)**

Portfolio	Average return %	Standard deviation	Beta
A	15	0.25	1.25
B	12	0.30	0.75
C	10	0.20	1.1
Market Index	12	0.25	1

(4) **(a)** Consider the following information for three funds A, B, C. Calculate, Treynor's and Sharpe's measures. Explain the difference. **(8)**

Funds	Average return	Standard deviation	Beta
A	15%	20%	0.90
B	17%	24%	1.10
C	19%	27%	1.20

Risk free rate of return is 10%

(4) **(b)** Calculate Jensen measures for the following and rank them. **(7)**

Portfolio	Average return	Beta
XYZ	15%	1.5
PQR	12%	0.90
ABC	10%	1.20
Market Index	12%	1.00

Risk free rate of return is 8%.

(5) **(a)** Explain the different types of risk in investments. **(8)**

(b) Discuss the Markowitz theory in detail. **(7)**

OR

(5) **Write a short note on (Any three)** **(15)**

a. Formula Plan

b. Portfolio Revision

c. Stochastic Dominance Model

d. Strategic Asset Allocation

e. Investment Process
