



BRAINWARE UNIVERSITY

Course Work Examination (December 2019)

**Programme – Doctor of Philosophy in Management / Doctor of Philosophy in
Commerce**

Course Name – Investment Analysis and Portfolio Management

Course Code – PHD-CMIPM04/PHD-MIPM04

Time allotted : 4 Hours

Full Marks: 100

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group –A

(Multiple Choice Type Question)

10 x 1 = 10

1. *Answer the following*

Justify following statements or comments.

- (i) Which one is preferable for a credit score: using historic receivable vs cash-flow?
- (ii) Systematic Investment is more merrier than speculation.
- (iii) Investment is a five step process.
- (iv) Risks are categorized into three categories.
- (v) Listed public companies are allowed to take investment from FIIs.
- (vi) ADR is the first step to issue in US Market.
- (vii) Beta is the measure of risk – comment on the truthfulness.
- (viii) What is the myth behind ground of bonus rumor.
- (ix) The economy was doing well. Growth in the industrial sector was moderate. Suddenly a news came about the likely fall of the government It adversely affected the market. Market price of many shares fall by 20% or more. Afterward, the market move up. Explain the reason behind market reaction. Describe the exact type of risk involved here (interest rate risk, purchasing power risk, management risk etc.
- (x) Define and explain yield to maturity. A bond of 8% interest is currently selling at Rs.105. It will mature after 5 years. Calculate its yield to maturity.

Group – B

(Short Answer Type Questions)

6 x 5 = 30

Answer any *six* from the following

2. Explain different types of Bonds. 5
3. Analyse the idea of price discovery by Private Placement. 5
4. An investor has to decide between two mutual funds x and y from financial reports. He is able to calculate the average returns and the standard deviation for the funds. The current risk free rate of interest is 7%. Using the sharp index compare the performance of x and Y funds 5

	X	Y
Average return R	19%	17%
Standard Deviation	21	16

5. Referring to the charting process of Technical Analysis. 5
6. Two share providing return as per CAPM model have beta value of 1.20 and 1.56 respectively.
 - (a) Calculate market return and risk free return of the developed market.
 - (b) Draw CML and show market return and risk free return on the line. 5
7. Given standard deviation $\sigma_1 = 2.18, \sigma_2 = 3.19$ and $\sigma_3 = 1.41$ and correlation coefficient $r_{12} = 0.95, r_{13} = -0.97, r_{23} = -1$. If equal investment is made in three securities, then calculate portfolio risk 5
8. Two assets A and b have following risk and return –
 Return of A: 22; Return of B: 20, Standard deviation of stock A15, Standard deviation of stock B: 18 and correlation coefficient is -1.
 Determine minimum risk of portfolio A and B. 5
9. Assume that risk free return is 7%. The market portfolio has an expected return of 14% and a standard deviation of return of 25%. Under equilibrium condition, as described in CAPM, what would be the expected return for a portfolio having no unsystematic risk and 205 standard deviation of returns. 5

Group – C

(Long Answer Type Questions)

6 x 10 = 60

Answer any *six* from the following

10. Following three portfolios provide the particulars given below-

Portfolio	Average Annual Return	Standard Deviation	Correlation Co-efficient
A	18	27	0.8
B	14	18	0.6
C	15	8	0.9
Market	13	12	

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Risk free rate of interest is 9.

11. Assume the following data available in investment market

Security	Expected return	Beta value	Alpha value
A	0.33	1.7	0.50
B	0.13	1.4	0.35
C	0.26	1.1	0.40
D	0.12	0.95	0.24
E	0.21	1.05	0.28
F	0.14	0.70	0.18
Nifty index	0.13	1.00	0.20
T-Bills	0.09	0	0.00

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Use SML and identify underpriced and overpriced stock

12. Stock X and y displays the following returns over the past three years-

Year	Return X	Return Y
2016-17	14	12
2017-18	16	18
2018-19	20	15

- a) Calculate expected return of a portfolio made up of 40% X and 60% Y
- b) Ascertain standard deviation of each stock
- c) Determine correlation co-efficient of stock X and stock Y.
- d) Estimate portfolio risk from the previous results

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13. Explain the concept of placing the shares other than public issues with advantages of each of the process. 10

14. An investor wants to analyze the capital structure of a company. He has the following information.
(Rs. in million)

	2010-11	2015-16	2018-19
Long term debt(11%)	12.27	9.46	11.19
Preferred stock (10%)	0.13	0.13	0.12
Common stock (Rs.10)	0.01	0.14	12.6
Capital surplus	5.67	6.35	6.19
Retained earnings	33.93	60.31	125.2
Dividend paid	3.005	3.684	10.08

Current price of the share in stock market is Rs.450. There is a rumor in the market that the company may issue bonus share. Investors wants the answer of the following points-

- a) Explain the logic of ground bonus rumor. 10
 - b) Comment on the Capital Structure.
 - c) Is it attractive to customers?
15. Derive and estimate with proper example the Portfolio Standard Deviation. 10
16. State the advantages of Portfolio Diversification with appropriate example. 10
17. Return from the share of a company is 21%. This is assumed to continue for next five years and after that it will grow at 10% indefinitely. Current year dividend paid is 32%. Required rate of return is 20%. Present price is Rs.57. Calculate estimated price of the share. 10
