



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fourth Semester - Master of Business Administration (MBA)

Semester End Examination; Aug. / Sep. - 2020

Portfolio Management

Mandi Arishu
3/9/2020
Max. Marks: 100

Time: 3 hrs

- Note: i) Answer any **ONE** full question among Q.1 and Q.2 in PART - A.
ii) Answer any **THREE** full questions among Q.3 to Q.8 in PART - A.
iii) Q.9 in PART - B (Case Study) is compulsory.

PART - A

- 1 a. What is Portfolio Management? Explain its process. 10
- b. Stock price of A and B is 50 and 70 respectively. The rupee return of both the stock for the next year is as follows:
- Economic Condition

	High growth	Low growth	Stagnation	Recession
Probability	0.3	0.3	0.2	0.2
Stock A return	45	50	60	75
Stock B return	90	80	70	60

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Calculate the expected return and standard deviation of each stock and what is portfolio return and risk, if equally invested?

OR

- 2 a. Define Portfolio risk. Explain why portfolio risk is not equal to the weighted average of the individual stocks standard deviation. 10
- b. The ALL Ltd. stock returns and the market return over 10 years are as below:

Year	1	2	3	4	5	6	7	8	9	10
ALL Ltd. return (%)	15	10	8	10	12	18	20	15	24	15
Market return (%)	5	8	10	7	5	5	7	7	5	5

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Calculate the beta for the ALL Ltd.

- 3 a. Describe in detail the assumptions / limitations of Markowitz portfolio theory. 10
- b. From the following data relating to RCOM, Maruti Ltd. and one year nifty return compute systematic and unsystematic risk for each stock and calculate portfolio risk, if equally invested?

	RCOM	Maruti	Nifty
Average Return	0.15	0.24	0.06
Variance of Return	6.25	5.87	2.26
Beta	0.70	0.26	
Correlation Coefficient	0.42		
Coefficient of determination	0.18		

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- 4 a. Distinguish between CAPM and arbitrage pricing theory. 10
- b. An investment company manages a stock fund consisting of four stocks with the following market values and beta:

Stock	Market Value (₹)	beta
BEL	2,00,000	1.16
SIT	1,00,000	1.2
AIT	1,50,000	0.80
GIT	50,000	0.50

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If the risk free rate of interest is 9% and the market return is 15%, what is the portfolio expected return?

- 5 a. What is mutual fund? Write a note on different types of mutual fund. 10
- b. "Formula plans help the investor to overcome being emotionally attached to the stock" explain and state its advantages. 10
- 6 a. How does constant rupee plan differ from constant ratio plan? Explain with an example. 10
- b. The following data available to you as a Portfolio manager:

Security	Return	Beta	Standard Deviation
A	0.33	1.7	0.5
B	0.13	1.4	0.35
C	0.26	1.1	0.4
D	0.12	0.95	0.24
E	0.21	1.05	0.28
F	0.14	0.7	0.18
Nifty Index	0.13	1	0.20
T-Bills	0.09	0	0

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In terms of security market line, which of the securities listed above are underpriced or overpriced and if portfolio is constructed using equal portions of the six stocks listed above, what will be the expected portfolio return?

- 7 a. Differentiate between systematic and unsystematic risk. 10
- b. The following information available regarding the three mutual funds and the market.

	R_p (%)	σ_p	β
Birla Advantage	25.38	4.00	0.23
ICICI Growth	36.28	6.86	0.52
Sundaram Growth	45.56	4.31	0.63
Nifty	36.74	3.69	1.00

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The risk free rate of index is assumed to be 9%. Rank the above funds using Sharpe, Jensen and Treynor measures.

- 8 a. What is behavioral finance? Explain the important Heuristic driven biases and cognitive errors that impair judgment. 10
- b. What is foreign portfolio investment? Explain different risk involved in international investing. 10

PART - B (Case study - Compulsory)

9. Mr. Vinay received ₹ 1 crore from his pension fund. He wants to invest in the stock market. The Treasury bill rate is 5% and the market return variance is 10. The following table gives the details regarding the expected return, beta and residual variance of the individual security. Suggest Mr. Vinay to construct optimum portfolio assuming no short sales.

Security	R_i	β_i	σ_{ei}^2
1	15	1	30
2	12	1.5	20
3	11	2.0	40
4	8	0.8	10
5	9	1.0	20
6	14	1.5	10

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