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University Examinations 2023/2024

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE FOR MASTER OF
SCIENCE IN FINANCE

BFS 5105: INVESTMENT AND ASSET MANAGEMENT

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- Citing an example, discuss the relevance of optimal capital structure theory in financing decisions of a firm. (4 marks).
- Legacy Ltd has a share capital of Sh 2 billion made up of 200 million shares of Sh 10 each. The shares are currently trading at Sh 20 each. The company is considering investing in a capital project costing Sh 600 million with cash flows whose net present value is Sh 800 million. The revenue and capital reserves of the company amount to Sh 400 million and the firm has a debt of Sh 4 million.

Required:

Compute the value of the firm before and after investing in the new project. (10 marks)

c) Using a diagram, demonstrate how an investor can select assets for investment on an efficient frontier curve, (6 marks)

d) The following details were extracted from Waps Ltd:

Returns

| State | Prob | X | Y |
|-------|------|----|-----|
| A. | .10 | -8 | -14 |
| B | .20 | 10 | -4 |
| C | .40 | 8 | 6 |
| D | .20 | 5 | 15 |
| E | .10 | -4 | 20 |

Required:

Calculate the expected return of X and Y (4 marks).

QUESTION TWO (20 MARKS)

An investor is planning to select either of the following securities M and N:

| Prob | M | N |
|------|----|----|
| .20 | 11 | -3 |
| .20 | 9 | 15 |
| .20 | 25 | 2 |
| .20 | 7 | 20 |
| .20 | -2 | 6 |

Required:

Determine the expected return of portfolio consisting of the following combinations and advise accordingly: (12 marks)

i) 100% M

ii) 75% M and N

- iii) 50% M and 50% N
- iv) 25% M and 75% N

QUESTION THREE (20 MARKS)

- a) By use of a diagram, discuss the Fisher's Separability Theorem as applied in investment selection. (6 marks).
- b) What factors does one ought to consider in portfolio selection? (6 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the arbitrage theory and its relevance in the international finance. (6 marks)
- b) Assume you have been provided with the following details of exchange rates for the US dollar (USD), British Pound (BP) and the Canadian dollar (CD):
USD 0.6/CD CD 1.6667/USD
USD 1.25/BP BP 0.8/USD
CD 2.5/BP BP 0.4/CD

Required:

Demonstrate how you could take advantage of these exchange rates to obtain an arbitrage profit. (6 marks)

QUESTION FIVE (20 MARKS)

Discuss how derivatives are using in risk management:

- i) Future contracts
- ii) Forwards
- iii) Swaps
- iv) Options (12 marks)