

**University of Swaziland**  
**Department of Accounting**  
**Supplementary Exam Paper**

Degree/Diploma and Year of Study : B.Com IV  
Title of Paper : Business Finance I.  
Course Code : AC 403 / IDE AC 403  
Time Allowed : 3 Hours.

- Instructions:
1. The total number of questions on this paper are four (4).
  2. Answer all the questions.
  3. The marks awarded for a question / part are indicated at the end of each question / part of question.
  4. Where applicable, submit all workings and calculations on the answer sheet alongside the case.
  5. Calculations are to be made to two decimal places of accuracy unless otherwise instructed.

**Note:** You are reminded that in assessing your work, account will be taken of accuracy of the language and the general quality of expression, together with the layout and presentation of your final answer.

**Special requirements** : Calculator and P V tables

**This paper is not to be opened until permission has been granted by the invigilator.**

**QUESTION 1:**

- a) Dube Nosipho is attempting to evaluate two possible portfolios, which consist of the same five assets held in different proportions. She is particularly interested in using beta to compare the risks of the portfolios, so she has gathered the data shown in the following table.

| Asset | Asset Beta | Portfolio Weights |                 |
|-------|------------|-------------------|-----------------|
|       |            | Portfolio A (%)   | Portfolio B (%) |
| 1     | 1.3        | 10                | 30              |
| 2     | 0.70       | 30                | 10              |
| 3     | 1.25       | 10                | 20              |
| 4     | 1.10       | 10                | 20              |
| 5     | 0.90       | 40                | 20              |
|       | Totals     | 100%              | 100%            |

**Required:**

- i Calculate the Beta for portfolios A and B. **(10 marks)**
  - ii Compare the risk of these portfolios to the market as well as to each other. Also, state, which portfolio is more risky? **(5 marks)**
- b) Motsa Decors Inc., Common stock paid a dividend of E1.20 per share last year. The company expects earnings and dividends to grow at a rate of 5% per year for the foreseeable future.
- i) What required rate of return for this stock would result in a price per share of E28? **(5 marks)**
- c) Using CAPM, find the required rate of return for an asset with a beta of .90 when the risk-free rate and market return are 8% and 12% respectively. State whether the asset is overpriced or underpriced if the expected rate of return from the asset is 10%. Do you buy the asset?

**(5 marks)**

**Total (25 marks)**

**QUESTION 2:**

A company in Manzini is contemplating to purchase a machine. Two machines are available each costing E500,000. The company is using straight line method of depreciation and the machine is expected to have no salvage value. The useful life of the machine is estimated to be 5 years and the required rate of return of the company is 10%. Cash flows after tax (CFAT) are expected to be as follows:

| Year | Machine A | Machine B |
|------|-----------|-----------|
| 1    | E150,000  | E500,000  |
| 2    | 200,000   | 150,000   |
| 3    | 250,000   | 200,000   |
| 4    | 150,000   | 300,000   |
| 5    | 100,000   | 200,000   |

**Required:**

Indicate which machine would be profitable using the following methods of ranking investment proposals.

- i) Pay back Method *(5 marks)*
- ii) Net Present Value Method (NPV). *(6 marks)*
- iii) Average Rate of Return Method (ARR). *(5 marks)*
- iv) Internal Rate of Return Method (IRR). *(9 marks)*

Note: you may take a range of 10% and 24%

**Total (25 marks)**

**QUESTION 3:**

The Nomura Corporation, Melkerns is considering to relax its collection efforts. Currently, the corporation has annual credit sales of E 2 million and bad debt losses are two percent. Expenses for the collection department are E 30,000 and its DSO is 30 days. As a result of easing its collection efforts, the collection expenses will be reduced to E 22,000 per year. The change is expected to increase bad debt losses to three percent and to increase the DSO to 45 days. In addition sales are expected to increase to E 2.2 million per year.

The opportunity cost of funds is 12 percent, the variable cost ratio is 75% and its marginal tax rate is 30%. Should Nomura Corporation relax its collection efforts? Advise. *(25 marks)*

**QUESTION 4:**

- a) Explain how the DuPont equation and chart combine several ratios to reveal the basic determinants of ROE. *(17 marks)*
- b) How can management use the DuPont system to analyse ways of improving the firm's performance? *(8 marks)*

**Total (25 marks)**

**End of Question Paper**

Present Value of an Annuity of \$1

Table with columns for periods (n) from 1 to 40 and interest rates (r) from 1% to 12%. Rows contain present value factors for each period and rate combination.

Present Value of an Annuity of \$1

Table with columns for periods (n) from 1 to 40 and interest rates (r) from 13% to 24%. Rows contain present value factors for each period and rate combination.

