

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

Programme of Study : Bachelor of Commerce  
Year of Study : Level 5 (Part Time)  
Title of Paper : Business Finance I.  
Course Code : IDE AC 403 (Part Time)  
Time Allowed : **3 Hours.**

- Instructions:
- 1. Total number of questions on this paper is four (4).**
  - 2. Answer all the questions.**
  - 3. The marks awarded for a question / part is 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 requirement : Calculator and P V tables**

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

**QUESTION 1:**

- a. If you have to pay yourself E 2,000 per year for the next 5 years, how much must you deposit today in an investment account that will pay 10 percent interest annually? The first E 2,000 payment will be withdrawn from the account at the end of the year.

**(5 marks)**

- b. The interest rate on the one-year Treasury bonds is 4.2 percent, the rate on two-year Treasury bonds is 5 percent, and the rate on three-year Treasury bonds 5.6 percent. These bonds are considered risk-free, so the rates given here are risk-free rates ( $k_{RF}$ ). The one year bond matures one year from today, the two-year bond matures two years from today, and so forth. The real risk-free rate ( $k^*$ ) for all three years is 3 percent.

**Required:**

- i) Using the expectations theory, compute the expected inflation rate in the second year
- ii) And in the third year.
- c. Koyal Corporation's 14 percent coupon rate, E 1,000 face value bonds mature in 30 years. The bonds sell at a price of E 1,353.54, and their yield curve is flat. Assuming that interest rates in the general economy are expected to remain at their current level, what is the best estimate of Koyal's Yield if investor wishes to keep the bond until maturity?
- d. Getmed's growth has slowed to a constant rate during the past five years. As a result, the company expects its common stock dividend to grow at a constant 6 percent for the remainder of the company's life. A few days ago, Getmed paid dividend of E 3. If the required rate of return on this company's stock is 12 percent, for how much can you buy the stock today?

**(6 marks)**

**Total (34 marks)**

**QUESTION 2:**

Financial statement analysis involves evaluation of a firm's financial position to identify its current strengths and weaknesses and to suggest actions that the firm might pursue to take advantage of those strengths and correct any weaknesses. Discuss in brief.

**(16 marks)****QUESTION 3:**

Southern African Power Corporation is engaged in the manufacture of power intensive products in Swaziland. It is a highly profitable company in the power space in African Continent. Now, as a part of its diversification plans, the corporation proposes to generate electricity using wind mills. The details of the proposal are given below:

1. Cost of the wind mill E 60 million.
2. Cost of land E 3 million.
3. Subsidy from the government to be received at the end of first year of installation E 3 million.
4. Maintenance cost will be E 0.8 million in year 1 and the same will increase by E 0.4 million every year.
5. Its life is estimated to be 10 years.
6. Cost of the funds invested 15%
7. Cost of electricity will be E 4.5 per unit in year 1. This will increase by E 0.10 per unit every year till year 7. After that it will increase by E 0.20 per unit
8. Residual value of the wind mill will be nil. However, land value will go to E 12 million, at the end of year 10.
9. Depreciation will be 100% of the cost of the wind mill in year 1 and the same will be allowed for tax purposes.
10. As wind mills are expected to work based on wind velocity, the efficiency is expected to be an average 30%. Gross electricity generated at this level will be 5 million units per annum. 4 percent of this electricity generated will be committed free to the State Electricity Corporation as per the agreement.
11. Corporate tax rate 30 percent

**Required:**

- i) Calculate the Net Present Value (Ignore tax on capital gains) and state whether the project is viable or not? **(23 marks)**
- ii) List down two non-financial factors that should be considered before taking a decision. **(2 marks)**

**Note:** Round of the numbers to 2 decimal digits.

**Total (25 marks)**

For your calculation use the following discount factors.

Year	1	2	3	4	5	6	7	8	9	10
Discount factor	0.87	0.76	0.66	0.57	0.50	0.43	0.38	0.33	0.28	0.25

**QUESTION 4:**

- a. Aptech Corporation is in the business of assembling computers and in anticipation of demand for the coming year it expects to order 126,000 memory chips for inventory. Aptech uses this inventory at a constant rate. The cost of placing each order is E 200; the purchase price per chip is E 25; and the firm's inventory carrying cost is 20% of the purchase price. On average the supplier of memory chips takes 5 days to deliver the goods. Aptech Corporation desires to maintain safety stock equal to 30 day supply of chips. (Assume a 360-day year).

**Required:**

- i) What is the economic order quantity (EOQ)? (Round off to nearest integer)
- ii) What is the average inventory level?
- iii) What is the inventory level right after a delivery is made?
- iv) How many orders must Aptech place during a year?
- v) At what inventory level must Aptech place an order?
- vi) What is its minimum cost of ordering and carrying inventory?

**(15 marks)**

- b. Hi-Value Corporation has fixed operating costs of E 46,000 and variable costs that are 30 percent of the current sales price of E 2.15. At a price of E 2.15, Hi-Value sells 40,000 units. Hi-Value can increase sales by 10,000 units by cutting its unit price from E 2.15 to E 1.95, but variable cost per unit won't change. Should Hi-Value cut its price?

**(10 marks)**

**END OF QUESTION PAPER**