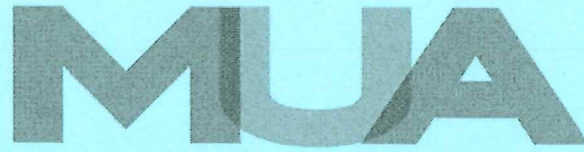


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**UNDERGRADUATE UNIVERSITY EXAMINATIONS**  
**SCHOOL OF MANAGEMENT AND LEADERSHIP**  
**DEGREE OF BACHELOR OF ARTS IN DEVELOPMENT STUDIES**

**PMT 404: PROJECT FINANCING**

**DATE: 18<sup>TH</sup> DECEMBER 2024**

**DURATION: 2 HOURS**

**MAXIMUM MARKS: 70**

**INSTRUCTIONS:**

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. Write all your answers in the Examination answer booklet provided.

## QUESTION ONE

Read the case study below and answer the questions that follow;

### SUSTAINABLE VENTURES LTD – FINANCING A GREEN ENERGY PROJECT

Sustainable Ventures Ltd, Kenyan firm, is a medium-sized company that focuses on renewable energy projects. With the increased demand for sustainable energy solutions in Kenya, the firm identified a lucrative opportunity to invest in a solar farm located in the semi-arid region of Kitui County. This project aimed to provide clean, affordable energy to local communities and businesses while contributing to the government's efforts to promote green energy. However, the company faced significant financial challenges in raising the required capital to kickstart the project, estimated to cost KES 500 million.

The management of Sustainable Ventures Ltd, led by CEO James Njoroge, explored different financing options. They reviewed internal financial statements, including the income statement and cash flow statement, to determine their capacity for self-financing. However, it became apparent that their internal resources were insufficient for a project of this scale. Njoroge's team then began considering external sources of finance, including loans, equity financing, and partnerships with other firms. Given the long-term nature of the project, they were particularly interested in long-term sources of finance, such as venture capital, project finance from financial institutions, and public-private partnerships (PPP).

To assess the feasibility of these financing options, the company performed a thorough investment appraisal. They used both traditional methods like the payback period and modern techniques like net present value (NPV) and internal rate of return (IRR) to evaluate the potential returns on the investment. The NPV analysis showed a positive value over a 10-year period, which encouraged the board of directors to proceed with the project. However, there were concerns about the risks associated with solar energy, including unpredictable weather patterns and fluctuating interest rates on potential loans.

In addition to financial evaluation, the team conducted a risk analysis. They applied sensitivity analysis to examine how changes in key variables like energy prices, construction costs, and maintenance expenses would affect the project's profitability. They also performed a break-even analysis to determine the minimum energy output required to cover the operational costs. Njoroge and his team realized that even with favorable financial projections, the project would be highly vulnerable to shifts in market conditions.

Sustainable Ventures Ltd ultimately decided to pursue a Build-Operate-Transfer (BOT) model, partnering with a European green energy company to finance and operate the solar farm for an agreed period before transferring ownership back to Sustainable Ventures Ltd. This partnership allowed the firm to mitigate financial risks while ensuring access to the technical expertise required for efficient project implementation. The financing agreement also included tax incentives from the Kenyan government, further reducing the project's financial burden.

Six months into the project, challenges started to emerge. Construction costs were higher than initially estimated, and delays in the supply of photovoltaic cells impacted the project's timeline. Sustainable Ventures Ltd was forced to revisit its budget, applying zero-based budgeting to reassess every cost and identify areas for cost-saving. Despite these challenges, the company remained optimistic, supported by strong stakeholder engagement and the growing demand for renewable energy in Kenya.

**Required:**

- i) Examine FIVE potential long-term sources of finance Sustainable Ventures Ltd could have considered for this project (5 Marks)
- ii) Explain how you would apply sensitivity analysis to assess the risks faced by Sustainable Ventures Ltd in this green energy project (5 Marks)
- iii) Discuss how the Build-Operate-Transfer (BOT) model helped Sustainable Ventures Ltd manage its financial risks. (5 Marks)

- iv) Discuss five roles of investment appraisal techniques like NPV and IRR in Sustainable Ventures Ltd's decision-making process. (5 Marks)
- v) Describe how Sustainable Ventures Ltd could apply zero-based budgeting to address the cost overruns experienced during the project (5 Marks)

## QUESTION TWO

As an expert in the financial management of public projects, you have been requested to present a seminar paper on "Project Management in the Public Sector; challenges and dilemmas."

### Required:

Explain the main issues you would address in your paper under the following headings:

- i) Phases of a public project. (6 Marks)
- ii) Planning and control techniques for a public project. (5 Marks)
- iii) Causes of failure of public projects. (4 Marks)

## QUESTION THREE

Juma Company Ltd is effectively controlled by the Juma family although they own only a minority of shares. The company is to undertake a substantial new project which requires external finance of about Sh.400 million, leading to a 40% increase in gross assets. The project is to develop and market a new product and is fairly risky. About 70% of the funds required will be spent on land and buildings. The resale value of the land and buildings is expected to remain equal to or greater than, the initial purchase price. Expenditure during the development period of the first 4 to 7 years will be financed from other revenue of Juma Company Ltd. This will have a consequent strain on the company's overall liquidity.

If, after the development stage, the project proves unsuccessful, then the project will be terminated and its assets sold. If, as is likely, the development is successful, the project's assets will be utilized in production and the company's profits will rise considerably. However, if the project proves to be very successful, then additional finance may be required to further expand the production facilities. At present, Juma Company Ltd is all equity financed. The financial manager is uncertain whether he should seek funds from a financial institution in the form of an equity interest, a loan (long or short term) and convertible debenture.

**Required:**

- a) Describe four factors to be considered by Juma Company Ltd in deciding on the method of financing the proposed expansion project. **(8 Marks)**
- b) Briefly discuss the suitability of equity, loans and convertible debentures for the purpose of financing the project from the point of view of:
  - (i) Juma Company Ltd. **(3 Marks)**
  - (ii) The provider of finance **(3 Marks)**
- c) Clearly state and justify the type of finance recommended for Juma Company Ltd. **(1 Mark)**

**QUESTION FOUR**

Ridges Company Ltd. is the process of preparing its capital budget for the financial year ending 30 June 2005. The company's capital structure as at 1 July 2004 and which the management considers as optimal is presented below:

	<b>Sh. Million</b>
Ordinary share capital (Sh.20 par)	100
Preference share capital (Sh.10 par)	160
Share premium	150
Retained earnings	550
Long term debt	640

The following additional information is available:

1. The company can borrow a Sh.200 million long to on loan at a pre-tax cost 13. Any additional debt can be obtained at a pre-tax cost of 16%.
2. The company can raise Sh.400 million through a bond issue. Each bond will have a face value of Sh.1,000 but will be issued at Sh.687. The coupon rate on the bonds will be 10% with maturity period of twenty years.
3. Preferred stock can be-issued at a pre-tax cost of 16.5%.
4. The company expects to generate Sh.700 million in net income before tax for the year ending 30 June 2005
5. The average annual growth rate in dividends is 5.5% and this rate is expected to continue into the foreseeable future. The company expects to pay an ordinary dividend per share of Sh.10 for the year ending 30 June 2005.
6. Assume a corporation tax rate of 30%

**Required:**

- a) Determine the cost of capital for each of the following sources of finance:
  - i) Long-term loan (3 Marks)
  - ii) Bonds (6 Marks)
  - iii) Additional Debt (2 Marks)
  - iv) Preference share capital (2 Marks)
  - v) Retained earnings (2 Marks)

**QUESTION FIVE**

- a) Briefly explain the importance of sensitivity analysis, with specific reference to investment appraisal under uncertainty. **(6 Marks)**
- b) Developing a project budget is a complicated, time-consuming process that requires a number of issues be addressed simultaneously. Explain three issues to be addressed in order to correctly undertake project budgeting. **(9 Marks)**

**QUESTION SIX**

- a) Describe the importance of cost estimation in project management **(6 Marks)**
- b) Describe the steps involved in the process of identifying and segregating project costs **(9 Marks)**

