

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**P.O. Box 972-60200 – Meru-Kenya**

**Tel: 020-2069349, 061-2309217. 064-30320 Cell phone: +254 712524293, +254 789151411**

**Fax: 064-30321**

**Website:** [**www.must.ac.ke**](http://www.must.ac.ke) **Email:** [**info@must.ac.ke**](mailto:info@must.ac.ke)

**University Examinations 2015/2016**

THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE

OF

BACHELOR OF COMMERCE

**HBF 2306: PROJECT APPRAISAL**

**DATE: APRIL 2016 TIME: 2 HOURS**

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

**QUESTION ONE (30 MARKS)**

1. Jesee limited wishes to expand its output by purchasing a new machine worth 170,000 and installation costs are estimated at 40,000/=. In the 4th year, this machine will call for an overhaul to cost 80,000/=

|  |  |
| --- | --- |
|  | Shs. |
| Year 1 | 60,000 |
| Year 2 | 72,650 |
| Year 3 | 35,720 |
| Year 4 | 48,510 |
| Year 5 | 91,630 |
| Year 6 | 83,715 |

This company can raise finance to purchase machine at 12% interest rate.

1. Compute NPV and PI and advise management accordingly (10 marks)
2. Discuss any five factors that can affect the cost of acquiring capital for an organization (10 marks)
3. Other than benefits to be realized or costs saved in lease or buy decisions, discuss any other factors to be put in consideration before a decision is made

(10 marks)

**QUESTION TWO (20 MARKS)**

A summary of the profit and loss reported in each of 3 product lines B, C and D is as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Product B | Product C | Product D |
|  | Shs.000 | Shs.000 | Shs.000 |
| Sales revenue | 60 | 40 | 40 |
| Less variable cost | 40 | 30 | 42 |
| Contribution | 20 | 10 | (2) |
| Less fixed cost | 15 | 12 | 10 |
| Net profit (loss) | 5 | 2 | (12) |

**Required:**

1. Comment on the financial situation as presented in the above summary
2. Comment on a decision to discontinue product C where
3. 60% of the fixed costs charged to it relate to advertising of product C and are avoidable if discontinued OR
4. All of the fixed costs charged to product C are avoidable if discontinued.
5. Discuss whether product D should be discontinued if

* 90% of the fixed costs charged to it are company costs arbitrarily apportioned to it OR
* Eliminating of its variable cost would results in an increase in material cost for products B and C because of lost discounts which would have the effect of increasing their variable costs by 5% OR
* Products B and D are complementary products whose sales demand is directly related to that of each other (20 marks)

**QUESTION THREE (20 MARKS)**

1. Matiaz Ltd wants to raise new capital to finance a new project. The firm will issue 200,000 ordinary shares (Sh.10 par value) at Sh.16 with Sh.1 floatation costs per share, 75,000 12% preference shares (Sh.20 par value) at Sh.18 with Sh.150,000 total floatation costs, 50,000 18% debentures (sh.100 par) at sh.80 ad raised at sh.5,000,000 18% loan paying total floatation costs of Sh.200,000. Assume 30% corporate tax rate. The company paid 28% ordinary dividends which is expected to grow at 4% p.a.

**Required:**

1. Determine the total capital to raise net of floatation costs.
2. Compute the marginal cost of capital (15 marks)
3. Discuss any five assumptions of the capital asset pricing model (5 marks)

**QUESTION FOUR (20 MARKS)**

1. Odongo Ltd. is considering three possible capital projects for next year. Each project has a 1 year life, and project returns depend on next year’s state of the economy. The estimated rates of return are shown below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **STATE OF THE ECONOMY** | **PROBABILITY OF OCCURRENCE** | **RATE OF RETURN** | | |
|  |  | **A** | **B** | **C** |
| Recession | 0.25 | 10% | 9% | 14% |
| Average | 0.50 | 14 | 13 | 12 |
| BOOM | 0.25 | 16 | 18 | 10 |

Required:

1. Find each project expected rate of return and standard deviation (6 marks)
2. Compute the correlation coefficient between
3. A and B
4. A and C
5. B and C (6 marks)
6. Compute the standard deviation of the portfolio. (3 marks)
7. Discuss three ways of classifying capital investments. (5 marks)

**QUESTION FIVE (20 MARKS)**

1. Assume a project costs Sh 30,000 and yields the following uncertain cash flows:

|  |  |
| --- | --- |
| Year | Cash flow |
| 1 | 12,000 |
| 2 | 14,000 |
| 3 | 10,000 |
| 4 | 6,000 |

Assume also that the certainty equivalent coefficients have been estimated as follows:



The risk-free discount rate is given as 10%

**Required:**

Compute the NPV of the project (12 marks)

1. Discuss the advantages of using sensitivity analysis in capital budgeting (8 marks)