

# **UNIVERSITY OF SWAZILAND**

## **SUPPLEMENTARY EXAMINATION 2005/6**

**TITLE OF PAPER: PROJECT EVALUATION**

**COURSE CODE: ECON 305**

**TIME ALLOWED: THREE (3) HOURS**

**INSTRUCTIONS:**

- 1. Answer Four (4) Questions. Two from Section and Two from Section B**
- 2. All Questions carry Equal Marks of 25 Each**
- 3. The relevant annuity tables are supplied**

**Do Not Open This Question Paper until the Invigilator has Granted Permission**

## SECTION A

### Question 1

Write explanatory notes on each of the following:

- a) Project life Cycle
- b) Relationship between project appraisal and evaluation
- c) Factors guiding the choice of a discount rate
- d) Hicks Kaldor compensation principle
- e) Sources of conflict between IRR and NPV.
- f) Advantages and disadvantages of both internal and external evaluators
- g) Sensitivity Analysis [5 marks each]

### Question 2

- a) "A bird in hand is worth two in the bush". Explain the relevance of this statement with regards to the time value of money in project appraisal. [5 marks]
  
- b) "Loving Cold" (Pty) Ltd has been engaged in Ice-cream production since 2002. During a project evaluation exercise done by KPMG last year it was found out that the demand for their ice cream had doubled. The company is trying to decide among three different ways on expanding their company production capacity. Each way involves different capital expenditure and benefits. Using different measures of investment worth, the company came out with the following results

Investment	Payback Period	Return on Investment (ROT)	Net Present Value
A	2 years	10%	+E1000
B	4 years	18%	+E2, 500
C	3 years	15%	+E5, 500

Which investment do you "Loving Cold" Company should choose? Indicate the basis of your recommendation and explain why you relied on the investment measure that you chose rather than the other two (remaining) measures.

[10 marks]

- c) What factors are advanced in favour of Cost Benefit Analysis in modern day project analysis? [10 marks]

### Question 3

Your first assignment in your new position as an Assistant Economic Planner at the Ministry of Economic Planning is to evaluate two new capital project proposals. Because this is your first assignment, you have been asked not only to provide a recommendation, but also to respond to a number of questions aimed at judging your understanding of the project appraisal process. This is a standard procedure for all new Economic Planners at the ministry and will serve to determine whether you are moved directly into the project planning unit or are provided with remedial training. The memorandum you received outlining your assignment as follows:

To: The New Assistant Economic Planner  
From: Mr. M. Dlamini (P.S. Economic Planning)  
Re: Project Analysis

Provide an evaluation of two proposed projects, both with 5- year expected lives and identical initial outlays of E110, 000. Both these projects would enhance GDP, and as a result, the required rate of return on both projects has been established at 12%. The expected after tax cash flows from each project are as follows:

	<b>Project A</b>	<b>Project B</b>
Initial Outlay	-E110, 000	-E110, 000
Year 1	20, 000	40, 000
Year 2	30, 000	40, 000
Year 3	40, 000	40, 000
Year 4	50, 000	40, 000
Year 5	70, 000	40, 000

In evaluating the projects, please respond to the following questions;

- i) Why is the project appraisal (CBA) process so important?  
(5 marks)
- ii) What is the payback period on each project? If the ministry imposes a 3 year maximum acceptable payback period, which of these projects should be accepted?  
(5 marks)
- iii) What are the criticisms of the Payback Period?  
(5 marks)

- iv) What are the discounted Payback Periods for each of these projects? If the ministry requires a 3- year maximum acceptable discounted payback period on new projects, which of these projects should be accepted?

(10 marks)

#### **Question 4**

a) What are the principal aims of Evaluation? [5 marks]

b) An evaluation can be done by an internal evaluator or an external one. Under what circumstances will it be suited to commission an evaluation to each of the two? [4 marks]

c) Participatory planning, implementation and evaluation are emphasized whenever community projects are planned. Explain why the success of community projects is based on the community's involvement.

[10 marks]

d) How is information resulting from an evaluation shared? Who may be the major interested parties of an evaluation exercise? Indicate the medium through which you can communicate your evaluation report to these interested parties. [6 marks]

## **SECTION B**

#### **Question 5**

a) What is Break-Even Analysis? And of what value is it in the assessment of projects viability? [9 marks]

b) The marketing department of NT company has estimated that output for its new product will be 15 000 units per year. The selling price will be E15 per unit and the fixed costs are E30 000 while its variable costs are E5. The management has approached you for advice on whether they should launch the new product or not:

As an analyst, compute the company's breakeven point and calculate the amount of profit /loss for the company [8 marks]

c) Assume you are in the business of producing/publishing textbooks, and are currently considering producing a textbook for high schools in Swaziland. Your investigations indicate that the fixed costs associated with such a project are E40 000, the variable costs are E1.20 per book and the book can only be sold at E2.00 per copy. You have also found that given the existence of other producers, you can also sell no more than 40 000 copies. Using Break-Even Analysis, determine if you should publish this textbook. Use diagrams to illustrate your answer.

[8 marks]

### Question 6

a) What is the Coarse theorem?

[5 marks]

b) Describe in detail two approaches for correcting externalities. Show clearly the gain or losses to all parties.

[12 marks]

c) Discuss three externalities that were associated with the construction of the Mbabane-Manzini highway.

[8 marks]

### Question 7

a) Distinguish risk from uncertainty.

[6marks]

b) Outline the Arrow-Lind theory on risk spreading

[8 marks]

c) show how we can use the Index of Pessimism/Huwrwicz criterion to select the best strategy under conditions of uncertainty. Use the pay-off matrix below:

	N	=	1	2	3	4
S =	1		0	4	0	3
	2		3	2	1	1
	3		3	2	0	0
	4		1	1	2	1

[12 marks]

**Question 8**

a) "The main objective of transport project is to save travelling time"

i) why do we consider time valuable? [5marks]

ii) State the clearly the objections which you would have against equating the value of time saved to the wage rate. [8 marks]

b) Describe four methods of valuing life and health which E.J. Mishan considers objectionable and inappropriate. [13 marks]