

28

**UNIVERSITY OF SWAZILAND
FACULTY OF SOCIAL SCIENCE
DEPARTMENT OF ECONOMICS**

MAIN EXAMINATION PAPER: MAY 2009

TITLE OF PAPER: PROJECT EVALUATION

COURSE CODE: ECON 305

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS:

1. Answer Four (4) Questions, Two from Section A and Two from Section B.
2. All Questions Carry Equal Marks of 25 each in total.
3. The Relevant Annuity tables are provided

**DO NOT OPEN THIS QUESTION PAPER UNTIL THE
INVIGILATOR HAS GRANTED PERMISSION.**

SECTION A

Question 1

Write explanatory notes on any five of the following concepts

- i) The multiple root problem
- ii) Major sources of conflict between NPV and IRR
- iii) The benefits of sensitivity analysis
- iv) Unilateral and reciprocal externality
- v) Numeric and Non-numeric models

[5 marks each]

Question 2

a) What is meant by planning in investment analysis? Discuss the main benefits of planning in project execution. [10 marks]

b) What justification do those in favour of cost benefit analysis advance for the exercise in (a) above [5 marks]

c) Lack of participatory planning, implementation and evaluation, has adverse effects on the community projects. Discuss. [10 marks]

Question 3

Mainline Enterprises is interested in initiating an income generating project. The management has decided to set aside E40,000 as an investment capital. However, the management is divided as to which of the two mutually exclusive projects with the same life of six years is to be undertaken. Details on these options are as follows:

The first capital project has the following cashflows: E10,000 for the first two years; followed by E15,000; and then E19,000 for the rest of its life

The second project has the following cashflows: E15,000; E9,000; E15,000; and E12,000 for the rest of its life with a terminal value of E5,000

The minimum acceptable rate of return is 8%

(a) As an economist, use the NPV approach to advise this company, taking into consideration the reasons for your selection. [15 marks]

(b) Outline the main elements of a formative and summative evaluation [10 marks]

Question 4

(a) Discuss the advantages and disadvantages of the Payback Period (PBP) method of project selection. [10 marks]

(b) Is there a way of addressing some of the drawbacks of the Payback Period method? If so, explain. [5 marks]

(c) How would sensitivity analysis be helpful to an investor wishing to undertake a massive capital investment? What are the main factors to which projects are sensitive? [10 marks]

SECTION B

Question 5

The marketing department of Basic Solutions Investments 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.

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

(b) 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 you can only sell the book 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]

(c) What are the limitations of Break-Even analysis as an investment decision making tool? [9 marks]

Question 6

(a) Define the concept of an externality. Why is the understanding of externalities important in project appraisal? [8 marks]

(b) Discuss and illustrate using diagrams where applicable four methods that could be used to solve the problem of externalities. [17 marks]

Question 7

- (a) Demonstrate how the Index of Pessimism/Hurwicz criterion could be used to select the best strategy under conditions of uncertainty. Use the payoff matrix provided:

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

Let $\alpha = 0.9$

[10 marks]

- (b) Explain how the best strategy is selected using the Minimax Regret criterion. Use the payoff table in (a) to select the best strategy on the basis of this criterion

[15 marks]

Question 8

- a) Define scenario planning and state the benefits of this technique in project investment analysis. [8 marks]
- b) "Information sharing is an important aspect in project evaluation." Briefly indicate the type of information and audience you can share this valuable information with. [8 marks]
- c) What are the two types of evaluators normally used in project appraisal? What are the benefits of each category? [9 marks]