UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER, 2012

TITLE OF PAPER :   PROJECT EVALUATION

COURSE CODE   :   ECON 309

TIME ALLOWED :   THREE (3) HOURS

INSTRUCTIONS   :   ANSWER THREE QUESTIONS:
                   QUESTION   1   AND   TWO   OTHER
                   QUESTIONS

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SECTION A (COMPULSORY)

Question 1

a) Discuss the competencies and shortcomings of external and internal evaluators.
[8 marks]

b) Give an example of a negative externality in consumption and with the aid of a diagram, demonstrate how taxation could be used to alleviate its impact on society.
[12 marks]

c) Distinguish between the following:
   i) Risk and uncertainty   [3 marks]
   ii) Objective and subjective probability   [3 marks]

d) Using the mini-max regret criterion , determine the decision to be taken under conditions of uncertainty given the following pay-off matrix:

STATES OF NATURE

		A	B	C
STRATEGIES	1	20	40	180
	2	-40	100	220
	3	60	70	90

[8 marks]

e) i)   Using the pay off matrix in part d) above, use the Hurwics index of Pessimism criterion to determine the decision to be taken when evaluating a project under conditions of uncertainty. Use an index of Pessimism of 0.9.   [8 marks]

f) Compare the results from d) and e) above with the outcome when the Laplace Index is used to determine the decision to be taken when evaluating a project under conditions of uncertainty. Assume that the States of Nature occur with probabilities $P_A = 0.5$, $P_B = 0.2$, and $P_C = 0.3$

[8 marks]

SECTION B (ANSWER ANY TWO QUESTIONS)

Question 2

a) Explain the conditions necessary for success in risk-pooling.

[5 marks]

b) Suppose a project is considered by a single person and the outcomes 1 and 2 have probabilities P_1 = 0.6 and P_2 = 0.4 with pay offs Y_1 = + **50** Y_2 = - **20.** Suppose the person begins with assets of 100 and the Certainty equivalent = 102. Calculate the cost of risk bearing and compare to the case where there are two people in the project sharing the gains and losses equally and the second person has the same utility function as the first one. Now suppose the pay offs for each individual are **+25 and -10** and each individual has initial assets of 100. Given the new certainty equivalence of 103 determine the cost of risk bearing.

[20 marks]

Question 3

a) With the aid of examples, describe the concept of shadow pricing.

[6 marks]

b) Distinguish between economic efficiency and equity. How does the Hicks-Kaldor test differ from the Scitovsky Double test?

[8 marks]

c) Using a suitable example, describe the Coarse Theorem and explain the limitations of this theorem.

[11 marks]

Question 4

Discuss the six phases in project evaluation

[25 marks]

Question 5

a) Explain the Arrow-Lind Theorem. What are the limitations of this theorem?

[12 marks]

b) With the aid of a diagram, explain the welfare effects of a per unit tax aimed at reducing the impact of a negative externality in production.

[13 marks]