UNIVERSITY OF SWAZILAND
FACULTY OF SOCIAL SCIENCE
DEPARTMENT OF ECONOMICS

MAIN EXAMINATION PAPER: DECEMBER 2018

TITLE OF PAPER: PROJECT DEVELOPMENT AND FINANCIAL ANALYSIS
COURSE CODE: ECO305
TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS:

1. Answer Question 1 and any other Two questions.
2. Question 1 is marked out of 50 marks whilst the rest of the questions are marked out of 25 marks each.
3. The Relevant Annuity tables are provided

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

Question 1 **(This Question is compulsory)**

a) Write explanatory notes on any five of the following concepts

i) The major differences between the NPV and IRR methods
ii) Contingent projects and mutually exclusive projects
iii) Economic analysis and financial analysis
iv) Numeric and Non-numeric models
v) Project and programme
vi) The major drawbacks of the Break-even(BEP) technique

[5 marks each]

b) How does the discounted cash-flow method answer some of the criticisms of the payback period and average rate of return methods? [5 marks]

c) Two new Internet site projects are proposed to a young start-up company. Project A will cost E250,000 to implement and is expected to have annual net cash flows of E75,000. Project B will cost E150,000 to implement and should generate annual net cash flows of E52,000. The company is very concerned about their cash flow. Using the payback period, which project is better, from a cash flow standpoint? [5 marks]

d) A four-year financial project has net cash flows of $20,000; $25,000; $30,000; and $50,000 in the next four years. It will cost $75,000 to implement the project. If the required rate of return is 0.2, conduct a discounted cash flow calculation to determine the NPV.

[5 marks]

e) What would happen to the NPV of the above project if the inflation rate was expected to be 4 percent in each of the next four years? [5 marks]

Question 2

a) What is project selection and why is it important in investment analysis?

[6 marks]

b) Mention and explain the implication of each of the factors to be considered in a good criteria for choosing selection models?

[12 marks]

c) What are scoring models? [7 marks]

Question 3

(a) You are the project analyst for Timber City (PTY) LTD, a manufacturer of solid wood chairs. You have been asked by the head of the marketing department to calculate a break even level for monthly sales.(i.e. determine the number of chairs Timber City needs to sell each in order to break even)

During the same month last year, the company sold 550 chairs. The business has enjoyed moderate growth over the last year, so you make the reasonable assumption that 600 chairs would be sold this month.

Let us also assume that you have projected your company's income statement, based upon an expected volume of 600 chairs per month. Further assume that you have classified each monthly expense as either fixed or variable. This is the classification you have prepared:

FIXED COSTS/MONTH	**AMOUNT IN EMALANGENI**
Building rent	10,000
Property tax	4,000
Utilities	900
Telephone	850
Depreciation	8,000
Insurance	500
Advertising	3,000
General Office Salaries	7,000
General maintenance	700
Total	**34,950**
VARIBLE COSTS/MONTH	
Direct materials (wood,vanish,ets)	28,800
Direct Labour	26,400
Overtime Labour	1,500
Billing Costs	2,000
General maintenance	1,300
Total	**60,000**

Currently, Timber City chairs are selling to your dealers for E250

i. Based on the information given, determine the break-even level of sales [10 marks]

ii. What is the break-even level in monetary terms? [5 marks]

b) What are the limitations of break-even analysis? [5 marks]

c) Why is break-even analysis considered useful despite the shortcomings stated in (b)? [5 marks]

Question 4

a) What is the Critical Path Method (CPM)? [3 marks]
b) Discuss the main steps in CPM project planning? [12 marks]
c) Consider a project for an integrated computer program that constitutes the following activities, their precedence, and their completion times

ACTIVITY	DESCRIPTION	REQUIRED PREDECESSOR	DURATION
A	Product Design	None	5 months
B	Market Research	None	1
C	Product analysis	A	2
D	Product Model	A	3
E	Sales Brochure	A	2
F	Cost Analysis	C	3
G	Product Testing	D	4
H	Sales Training	B,E	2
I	Pricing	H	1
J	Project Report	F,G,I	1

Construct a network diagram for this project. Identify all possible paths and indicate the critical path and its duration. [10 marks]