UNIVERSITY OF ESWATINI

DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL SCIENCE AND PLANNING

FINAL EXAMINATION, MARCH 2021

MSc. E.R.M.

TITLE OF PAPER: ENVIRONMENTAL MANAGEMENT & RESOURCE ECONOMICS

COURSE NUMBER: GEP601

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS:

1. ANSWER TWO QUESTIONS
2. ANSWER ONE QUESTION FROM EACH SECTION
3. ILLUSTRATE YOUR ANSWERS WITH EXAMPLES AND USE APPROPRIATE TERMINOLOGY

ALLOCATION OF MARKS: EACH QUESTION CARRIES 50 MARKS

THIS QUESTION PAPER SHOULD NOT BE OPENED UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

GEP601: ENVIRONMENTAL MANAGEMENT & RESOURCE - MARCH 2021

SECTION A

ANSWER ONE QUESTION

QUESTION 1

The Eswatini Electricity Company intends to establish a E12 billion thermal (coal-fired) power plant at Lubhuku, Malindza with the intention of assisting the country to meet its energy requirements and reduce its dependence on the Republic of South Africa. This proposed project is expected to bring jobs and significantly contribute to the country's GDP. Contrary to this, the country has committed itself to doubling the share of renewable energy mix by 2030.

a) Outline the process that needs to be followed before a decision on the proposed project is made. (25 marks)

b) How would you determine whether to forgo the Nationally Determined Contributions commitments or halt the proposed project from either a 'value' or 'cost' point of view? (25 marks)

(50 Marks)

QUESTION 2

Discuss the theory and applicability of the Environmental Kuznets Curve (EKC) on greenhouse gas emissions. **(50 Marks)**

SECTION B

ANSWER ONE QUESTION

QUESTION 3

a) Describe the advantages and disadvantages of using the following instruments in environmental management:

i) Standards (12 marks)

ii) Taxes and subsidies (14 marks)

b) Discuss the following methods of natural resource valuation.

i) Contingent valuation method (12 marks)

ii) Hedonic pricing method (12 marks)

(50 Marks)

QUESTION 4

Discuss the following environmental management tools:

a) Strategic environmental assessment (20 marks)

b) Life cycle assessment (20 marks)

c) Environmental accounting (10 marks)

(50 Marks)