



"Investing in Africa's Future"

**COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES
NMEC 404: RESOURCE AND ENVIRONMENTAL ECONOMICS
SECOND SEMESTER EXAMINATIONS
APRIL 2026
LECTURER: MR G MANDEWO
TIME: 3 HOURS**

INSTRUCTIONS

ANSWER ANY **FOUR** QUESTIONS FROM THIS PAPER
MARKS ALLOTTED TO EACH QUESTION ARE SHOWN

CLEAR AND NEATLY PRESENTED WORK WILL BE
AWARDED MARKS FOR PRESENTATION

Question 1

- (a) Describe the human-environment relationship and its significance in environmental valuation. **[6 Marks]**
- (b) What are normative criteria for decision-making in environmental economics? Provide examples. **[6 Marks]**
- (c) Explain how optimal outcomes are determined in environmental policy analysis. **[6 Marks]**
- (d) Taxes and subsidies enhance internalisation of externality. Explain how. **[7 Marks]**

Question 2

- (a) Compare and contrast Benefit-Cost Analysis (BCA) and Cost-Effectiveness Analysis (CEA) in environmental decision-making. **[10 Marks]**
- (b) What is impact analysis, and how is it used to assess environmental projects? **[6 Marks]**
- (c) Write brief notes on the following (Hint: ensure that the concept is explicit by using algebra and diagrams)
 - (i) Coase theorem **[5 marks]**
 - (ii) Pollutant taxonomy **[4 marks]**

Question 3

- (a) Outline the taxonomy of pollutants and discuss how this classification aids in pollution control. **[5 Marks]**
- (b) Define what constitutes an efficient allocation of pollution. **[5 Marks]**
- (c) Describe how markets can be used to allocate pollution rights efficiently. **[7 Marks]**
- (d) Evaluate different policy responses for pollution control and their cost-effectiveness, especially for non-uniformly mixed pollutants. **[8 Marks]**

Question 4

- (a) Discuss areas of mismanagement of replenishable but depletable resources such as fisheries **[5 Marks]**
- (b) Why are common property resources subjected to over-exploitation? **[5 Marks]**
- (c) Suggest practical measures the community may adopt to ensure sustainable use of a common property resource **[5 Marks]**
- (d) Make a clear distinction between contemporaneous externality and intergenerational externality **[5 Marks]**
- (e) Illustrate and explain market allocation of fisheries **[5 Marks]**

Question 5

(a) The main thrust of Environmental and resource economics is to determine the optimal market allocations of resources and proposing solutions to environmental problems. Using illustrations explain the efficient allocation of the following resources

- (i) Replenishable but depletable resource such as water **[5 marks]**
- (ii) Recyclable Resources **[5 marks]**

(b) Propose practical and viable solutions to the following problems and demonstrate how the suggested solutions resolve the problem

- (i) Open access resources **[5 marks]**
- (ii) Depletable resources **[5 marks]**
- (iii) Recyclable resources **[5 marks]**

END OF EXAMINATION