



National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
2024_2 EXAMINATION

COURSE CODE: ESM422

COURSE TITLE: Resource Evaluation

COURSE UNIT: 2

TIME 2 HOURS

Instruction: Attempt question number ONE (1) and any other TWO (2) questions.

Question number one (1) is compulsory and carries 30 marks, while the other questions carry equal marks (20) each

1a. What are the key differences between aerodynamics and hydrodynamics within the field of fluid dynamics? 4marks

1b What is the fundamental difference between the Market Price Approach and the Income Approach in valuing environmental assets? 6marks

1c. Explain the concept of "resource rent" and how it relates to valuing mineral assets. 6marks

1d. What is the Contingent Valuation Method (CVM) primarily used for? 4marks

1e. What are the key steps involved in conducting a generic Cost-Benefit Analysis? 7marks

1f. What is the role of sensitivity analysis in CBA? 3 marks

2a. What is the primary focus of quantitative geomorphology? 5marks

2b. What is the role of rivers in geomorphological processes? 5marks

2c. What is the fundamental principle behind seismic refraction and how is it applied in geophysical exploration? 5marks

2d. How does reflection seismology work, and what information can be obtained from the recorded seismic reflections? 5marks

3a. What are Electrical and Electromagnetic geophysical techniques? 5marks

3b. Describe the DC Resistivity method. How does it work? 5marks

3c. What is Induced Polarization (IP) and how is it related to DC Resistivity? 5marks

3d. Explain the Self Potential (SP) method? 5marks

- 4a. What is the Market Price Approach in valuing environmental assets? 5marks
- 4b. What are the advantages of using the Market Price Method for valuing environmental assets? 5marks
- 4c. What is the Income Approach used for valuing mineral assets? 5marks
- 4d. How does the Net Price Method work in the Income Approach? 5marks
- 5a. What is the main objective of resource evaluation? 5marks
- 5b. How is resource evaluation related to development planning and project formulation?
- 5c. What challenges are associated with valuing environmental assets using the Market Price Approach? 5marks
- 5d. What is the Income Approach used for in resource evaluation? 5marks