



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF ENVIRONMENTAL SCIENCE**  
**Plot 91, Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja**

**COURSE CODE: ESM304** 1234

**CREDIT UNIT: 3**

**TIME: 3 Hours**

**COURSE TITLE: RESEARCH METHODS AND FIELD TRIP**

**Instruction:** Attempt question number ONE (1) and any other FOUR (4) questions. Question number one (1) is compulsory and carries 22 marks, while the other questions carry equal marks (12) each.

- 1a. Differentiate between bibliographies and references [2 marks]
  - b. Enumerate the essence of editing in research works. [3 marks]
  - c. Differentiate between summary and conclusion [2 marks]
  - di. State the ways by which answers to environmental problems can be obtained [3 marks]
  - ii. Define the term research [3 marks]
  - iii. Differentiate between validity and reliability [3 marks]
  - ei. Explain the concept of pure research in environmental science [3 marks]
  - ii. Classify researcher endeavors in a research work [2 marks]
  - f. What is the essence of descriptive research [1 mark]
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- 2a. How are ideas for proposal writing generated [2 marks]
  - b. Write briefly on the concept of note taking in Research work [3 marks]
  - c. State the developmental stages in a research work [4 marks]
  - d. Define the term writing style in Research proposal [2 marks]
  - e. Explain briefly the technicality involved in proposal writing [1 mark]
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- 3a. What is the goal of a research design [2 marks]
  - b. What are the types of research design [3 marks]
  - c. State the characteristics of survey design [4 marks]
  - d. List the types of cross- sectioned design [2 marks]
  - e. State the importance of descriptive, exploratory and explanatory design [1 mark]
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- 4a. Explain the scope of spurious relationships. [2 marks]
  - b. Enumerate the importance of analysis of numerical data [3 marks]
  - c. State the confusing aspects of data analysis [4 marks]
  - d. The importance of proposal writing cannot be overemphasized. Discuss [2 marks]
  - e. Define in formal terms, proposal [1 mark]
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- 5a. Name the approaches in collecting data for a research work. [2 marks]
  - b. Enumerate the ways for analyzing your data [3 marks]

- c. Name the operational steps needed to conduct any research in environmental science [4 marks]
- d. What are the properties of data collection [2 marks]
- e. State one type of data commonly encountered in research [1 mark]

- 6a. Describe briefly what exploratory research [3 marks]
- b. What are the steps in research process [4 marks]
- c. What does conceptualizing of a research design mean? [2 marks]
- d. Define the term Research tool. [1 mark]