



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**University Village, Plot 91 Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi - Abuja.**  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF ENVIRONMENTAL SCIENCE**  
**2025\_2 EXAMINATIONS.**

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**COURSE CODE: ESM 304**

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

**TIME: 3 HRS**

**INSTRUCTION:** Attempt question number one (1) and any other three (3). Question number one (1) is compulsory and carries 25marks, while the other questions carry equal marks (15) each

1. List and discuss FIVE elements of research (25marks)
2. Formulating research problem is the first and foremost step in the research process. Discuss. (15marks)
  - 3a: What is a research proposal (5marks)
  - 3b. Justify the need for research proposal (10marks).
4. Differentiate between pure and applied research. (15 marks)
5. Write notes on the following: (a) Explanatory research (b) Correlation research. (15marks)
  - 6(a) Identify and formulate a research problem in environmental science (5marks)
  - 6(b) Explain the sampling techniques that will be most appropriate for your study (10marks)