



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**

**Faculty of Sciences**

**2024\_2 EXAMINATION**

**Course Code: ESM 341**

**Course Title: Introduction to Instrumentation Measurements and Field Methods in Environmental Science**

**Course Unit: 2 Credit Units**

**Time Allowed: 2½ Hours**

**Total Score: 70 Marks**

**Instructions: Answer question ONE and any other TWO questions**

1.
  - a. Describe sampling.
  - b. Why do we carry out sampling in research?
2. Describe the use of litmus paper in measuring pH (water acidity).
3. Describe the instruments that could be used for integrated air sampling.
4. Discuss the implications of cleaning old bottles for re-use in sample collection for laboratory analysis.
5. Describe the function of Atomic Absorption Spectrophotometer (AAS).