



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
DEPARTMENT OF ECONOMICS  
FACULTY OF SOCIAL SCIENCES  
2022\_2 EXAMINATION**

**COURSE TITLE: RESEARCH METHODOLOGY**

**COURSE CODE: ECO 311**

**UNITS: 3**

**TIME ALLOWED: 3 HOURS**

**INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS. All QUESTIONS HAVE EQUAL MARKS**

- 1). Enumerate and explain the various limitations of applying scientific method in social science research **(17.5 Marks)**
- 2a). List four (4) avenues of identifying a research problem **(4 Marks)**
- 2b). Explain briefly three (3) guiding principles for evaluating, and selecting a researchable problem **(13.5 Marks)**
- 3a). Explain briefly the two basic data sources **(8.5 Marks)**
- 3b). Explain three (3) differences between a theoretical framework and a conceptual framework. **(9 Marks)**
- 4). List and explain 5 different techniques of data collection in researcher **(17.5 Marks)**
- 5a). Distinguish between the use of student t-test and Chi-square in hypothesis testing **(5 Marks)**
- 5b). The producer of electric kettle declares that the life spans of produced kettles have a variance of 9.0 hours. Suppose a random sample of 12 kettles is selected from the produced kettles with a sample variance of 8.5 hours. Test the hypotheses at 5% significance level that  $\sigma^2 = 9.0\text{hrs}$  against  $\sigma^2 \neq 9.0\text{hrs}$ . Interpret your result. **(12.5 Marks)**