

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**SCHOOL OF ENVIRONMENTAL TECHNOLOGY**  
**DEPARTMENT OF ARCHITECTURE**  
**FIRST SEMESTER EXAMINATION FOR 2016/2017 SESSION**

**COURSE TITLE:** RESEARCH METHODS

**COURSE CODE:** ARC 711

**CREDIT UNIT:** 2

**TIME ALLOWED:** 2 HRS

**COURSE LECTURER:** DR A. D. ISAH

**HEAD OF DEPARTMENT:** DR P. AYUBA

**INSTRUCTIONS:** Answer questions any three questions. Avoid unnecessary details and be precise with your answers.

- Q1 a. Describe variables as elements and components of a research.
- b. Describe the process of developing variables for examining a given phenomenon in a research work.
- Q2 a. Enumerate and discuss components that constitute research process framework.
- b. Distinguish between quantitative, qualitative and mixed method researches.
- Q3 a. Enumerate any three (3) data collection instruments and state their merits and demerits in application.
- b. Write short notes on the following items
- i. Data documentation
  - ii. Data coding
  - iii. Data processing
  - iv. Research Method
  - v. Research Methodology
- Q4 a. Describe the basic features of APA referencing style and citation.
- b. Write on the following sampling procedure
- i. Random sampling procedure
  - ii. Systematic sampling procedure
  - iii. Stratified sampling procedure
  - iv. Sample size
  - v. Sample method
- Q5 a. Describe the following types of research
- i. Basic research
  - ii. Applied research
  - iii. Summative evaluation
  - iv. Formative evaluation
  - v. Action research
- b. Describe basic journal and thesis research reporting structure respectively.