



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA**  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF COMPUTER SCIENCE ...**  
**JANUARY 2021 EXAMINATIONS**

**COURSE CODE** : **CIT 831**  
**COURSE TITLE** : Software Engineering Methodologies  
**CREDIT UNIT** : **3**  
**TIME ALLOWED** : **2½ HOURS**  
**INSTRUCTION** : Answer Questions 1 (One) and Any Other Four (4)

- 1a) Enumerate any six (6) attributes of a Good Software (**3 marks**)
- 1b) Enumerate the advantages of Incremental development (**3mks**)
- 1c) Write short notes on the following (
- i) Software process (**1 mark**)
  - ii) Software Process Model (**1mark**)
  - iii) Software Design (**2mark**)
  - iv) Software Inspections (**2 marks**)
- 1d) Enumerate any six (6) architectural design decisions (**3Marks**)
- 1e) Identify the various Requirement Engineering processes (**2 marks**)
- 1f) What are the types of specification techniques available? (**2 marks**)
- 1g) Give a concise explanation of the types of domain-specific examples in existence (**3 marks**)
- 2a) Write short notes on the following terms: (**6 marks**)
- i) Software Engineering Methods,
  - ii) CASE tools
  - iii) Requirements management
- 2b)** Briefly describe the steps you would follow in building a prototype of Road traffic monitoring software? (**6 marks**)
- 3a) Compare the following in terms of Software Engineering (**8 marks**)
- i) Context Model and process model
  - ii) Object-Oriented Design and Functional design
  - iii) Software verification and Software validation
  - iv) Software Engineering and Computer Science
  - v) Throwaway and Evolutionary Prototyping
- 3b) Enumerate the advantages of the following (**4 marks**)
- i) Formal Specification
  - ii) Spiral Model
- 4a) What is software engineering methodology? (**2 marks**)

- b) Describe the available requirement validation checks? (**5 marks**)
  - c) What are the types of specification techniques available? (**2 marks**)
  - d) Give a concise explanation of the types of domain-specific examples in existence (**3 marks**)
- 5a.) Describe the limitations of the Waterfall Model (**4Marks**)
- 5b) Explain the Issues of Professional Responsibility in relation to software process (**4mks**)
- 5c) What is requirement Validation? Briefly describe Requirements Validation approaches you know (**4 marks**)
- 6a) Itemize the advantages and disadvantages of repository models (**4marks**)
- 6b.) Explain the following terms as associated with CASE (**4 marks**)
- 6c) Write short notes on any four phases involved in a software development life-cycle (**4marks**)