NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWASY, 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)**