



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI-ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2021_2 EXAMINATIONS

COURSE CODE: CIT 831

COURSE TITLE: SOFTWARE ENGINEERING METHODOLOGIES

CREDIT: 3 UNITS

TIME ALLOWED: 2 ½ HOURS

INSTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY FOUR (4) OTHERS.

- 1(a) Software products are of types. Briefly explain them. *(3 marks)*
- (b) Explain the various models used to document architectural design. *(4 marks)*
- (c) What is the relevance of system modeling? *(2 marks)*
- (d) Enumerate the activities required to develop a software system. *(4 marks)*
- (e) Briefly explain the requirement validation techniques that you know. *(4 marks)*
- (f) The use of formal methods has been applied in various areas. Explain these application areas. *(3 marks)*
- (g) When are repository models commonly used? *(2 marks)*
- 2(a) Differentiate between a software process and a software process model. *(2 marks)*
- (b) Professional responsibility has a lot of issues. Briefly describe some of them. *(8 marks)*
- (c) In what ways is repository model advantageous? *(2 marks)*
- 3(a) What is a Software Process Model? Give examples of the process perspectives. *(4 marks)*
- (b) During prototyping, one must follow certain prototyping steps. Describe the steps. *(8 marks)*
- 4(a) Briefly describe the disadvantages of repository models *(4 marks)*
- (b) With suitable diagram, describe the spiral development model. *(8 marks)*
- 5(a) Waterfall model despite its common usage has a lot of drawbacks. Describe them. *(3 marks)*
- (b) With suitable examples, briefly explain the types of viewpoints. *(9 marks)*
- 6(a) What are the advantages of Formal Specification. *(5 marks)*
- (b) Defect testing and debugging are distinct processes. Explain the distinction. *(2 marks)*
- (c) Outline the stages of testing of any system. *(5 marks)*