



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI-ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
SEPTEMBER 2020_1 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) i. In comparing the cost of software and hardware, which of them cost higher? *(2 marks)*
ii. How will software engineering influence the situation? *(1 mark)*
- (b) Describe the types of interview. *(3 marks)*
- (c) The term ‘software inspections’ have been defined in many ways. Review any 4 of these definitions. *(4 marks)*
- (d) i. What do you understand by functional requirements? *(2 marks)*
ii. Illustrate using appropriate examples, any two (2) functional requirements. *(2 marks)*
- (e) Waterfall model consists of separate and distinct phases of specification and development. With a well labeled diagram, show the distinct phases and their linkages. *(5 marks)*
- (f) Briefly explain the problems that may arise when using natural language in writing requirements definitions. *(3 marks)*
- 2(a) Outline the stages of software design. *(8 marks)*
- 2(b) Choose and explain any four (4) attributes of a good software? *(4 marks)*
- 3(a) i. What is requirement document? *(3 marks)*
ii. Outline the guidelines for writing requirement. *(3 marks)*
- 3(b) i. What is software specification? *(2 marks)*
ii. Produce detailed description of non-functional requirements. *(4 marks)*
- 4(a) Provide any four examples of the generic process model. *(4 marks)*
- (b) Describe data flow diagrams and their applications. *(4 marks)*
- (c) In what ways is evolutionary development problematic? *(2 marks for any 2 points)*
- 5(a) Describe two specification techniques. *(4 marks)*
- (b) Enumerate any five (5) systematic algebraic specifications. *(5 marks)*
- (c) Incremental Development is said to be advantageous in several ways. Explain them. *(3 marks)*
- 6(a) i. Architectural design aids in decision making, justify this *(2 marks)*

- ii. Outline the decisions on the application of the architecture.
- (b) Explain the concept of software design.
- (c) Outline any four types of process model.

(6 marks)
(2 marks)
(2 marks)