

**NATIONAL OPEN UNIVERSITY OF NIGERIA,**

**PLOT 91, CADASTRAL ZONE, UNIVERSITY VILLAGE, JABI – ABUJA**

**FACULTY OF SCIENCES**

**APRIL 2019 EXAMINATION**

**COURSE CODE: CIT333**

**COURSE CREDIT: 2**

**COURSE TITLE: SOFTWARE ENGINEERING I**

**TIME ALLOWED: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY OTHER THREE (3)**

 **QUESTIONS**

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1a. There is a tendency that ‘software crisis’ can occur in software engineering. Describe this phenomenon, highlighting the sources of this sort of crisis. (4 marks)

1c. Enumerate the four (4) levels of testing in software engineering. (4 marks)

1c. Give a concise description of three (3) common standards’ in Software Engineering

 (6 marks)

1d. Briefly explain the following software engineering terms:

 i. Alpha testing (2 marks)

 ii. Acceptance testing (2 marks)

iii. Symbolic debugging tool (2 marks)

 iv. Profiling tool (2 marks)

1e. Outline any six (6) major tasks that are required for the implementation of a system.

 (3 marks)

 **[Total = 25 marks]**

2a. Draw a well-labelled diagram of the Incremental Life Cycle Model. (7 marks)

2a. State the eight (8) common stages of software development commonly adopted in software engineering. (8 marks)

 **[Total = 15 marks]**

3a. List any two (2) merits of the top-down programming concept. (2 marks)

3b. Write a pseudo code to find the average of numbers between 1 and 10, with 10

 inclusive. (8 marks)

3c. Outline any five (5) guidelines for writing pseudo-codes. (5 marks)

 **[Total = 15 marks]**

4a. Describe the three (3) major approaches of writing **Modular** programs. (9 marks)

4b. Explain the concept of ‘Modularity’ within the context of software engineering.

 (*3 marks)*

4c. List any three (3) benefits of the modular design. (3 marks)

 **[Total = 15 marks]**

5a. Briefly describe the concept of a ‘Requirement’, in system engineering. (2 marks)

5b. Discuss the two (2) forms of Requirements in software engineering. (*6 marks)*

5c. Enumerate seven (7) common software design concepts. (7 marks)

 **[Total = 15 marks]**