



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI – ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
OCTOBER 2019 EXAMINATION

COURSE CODE: CIT333

COURSE TITLE: SOFTWARE ENGINEERING

COURSE CREDIT: 2 UNITS

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS

QUESTIONS

1a. Normally, standards are enforced in software engineering. Give a brief explanation of three (3) common standards' in Software Engineering.

(9marks)

1b. Outline any six (6) goals of software quality assurance within the context of formal software testing?

(6 marks)

1c. 'Software Crisis' is a common term that features prominently, at the initiation of software engineering. Enumerate the signs of this sort of crisis.

(6 marks)

1d. The verification process normally entails a number of processes. Outline four (4) of these processes.

(4 marks)

[Total = 25 marks]

2a. Provide four (4) major software quality assurance activities undertaken in the course of the detailed design phase.

(4 marks)

2b. Highlight six (6) elements required for compatibility testing in a computing setting.

(9 marks)

2c. Give the main reason for establishing buddy checks.

(2 marks)

[Total = 15 marks]

3a. Give a brief account of the following based on the Capability Maturity Model:

i. Validation

(3 marks)

ii. Verification

(3 marks)

3b. State the main application of a test case.

(2 marks)

3c. What do you understand by white box testing? (3 marks)

3d. Describe the concept of 'software testing', within the context of product validation and verification. (4 marks)

[Total = 15 marks]

4a. Highlight the key processes involved in the following phases:

i. Software Acceptance and Delivery Phase (2 marks)

ii. Software Sustaining Engineering and Operations Phase (2 marks)

4b. Analyse the grey box testing within the context of software engineering (3 marks)

4c. Analyse the following within the context of software engineering :

i. Product evaluation (4 marks)

ii. Product monitoring (4 marks)

[Total = 15 marks]

5a. Give a concise explanation of the following:

i. Symbolic debugging tool (2 marks)

ii. Profiling tool (2 marks)

iii. Alpha testing (2 marks)

iv. Acceptance testing (2 marks)

5b. State the four (4) levels of testing in software engineering: (4 marks)

5d. What do you understand by black box testing? (3 marks)

[Total = 15 marks]