ELIZADE UNIVERSITY

ILARA-MOKIN

FACULTY: BASIC AND APPLIED SCIENCES
DEPARTMENT: MATHEMATICS AND COMPUTER SCIENCE
1st **SEMESTER EXAMINATION**
2018 / 2019 **ACADEMIC SESSION**

COURSE CODE: CSC 423

COURSE TITLE: Software Engineering

COURSE LEADER: Dr. Ibraheem Ogundoyin

DURATION: $2\frac{1}{2}$ Hours

HOD's SIGNATURE

INSTRUCTION:

Candidates should answer QUESTION 1 and any other **THREE** Questions.

Students are warned that possession of any unauthorized materials in an examination is a serious assessment offence

Students are permitted to use ONLY a scientific calculator.

Question One

A. Software engineering is an engineering discipline that is concerned with all aspects of software production. Explain the underlined.

B. Draw a UML state diagram for an order management system that will receive order request sent by a customer, confirm and check whether it is a normal or special order before confirming and dispatching the order.

C. Critically distinguish plan driven development from agile development.

Di. Some people argue that developers should not be involved in testing their own code but that all testing should be the responsibility of a separate team. Give arguments for and against testing by the developers themselves.

ii. Highlight three stages of software testing.

Question Two

A. Illustrate with diagram, the software testing process.

B. Would you say there is a best method for developing any type of software? Give reasons for your answer.

C. Explain how increased demands in software can aid software failure.

Question Three

A. Suggest a UML activity diagram for an authentication system that allows users to enter login details and determine if it is a valid or invalid input.

B. What do you think may be the importance(s) of Incremental development over waterfall development?

Ci. What do you think is the difference between generic software products and custom software products in terms of requirements specification?

ii. Differentiate between user requirements and system requirements.

Question Four

A. Explain the principal activities required to develop good software.

B. Briefly explain the essential attributes of good software.

C. Highlight five principles of agile methods.

Question Five

A. List and explain the processes involved in requirements engineering.

B. What sort of architecture pattern would you recommend for a distributed system? Give reasons for your answer.

Ci. Why is it important to test at the development phase before testing the system as a whole?

ii. What is regression testing?

Question Six

A(i). Choose a software development project of your choice. State how you will go about its requirement gathering.

(ii). Identify entities in the system being developed. Use UML diagrams (use case, sequence and class diagrams) to specify the system.

B. Explain why systems developed as prototypes should not normally be used as production systems.

C. Enumerate the design process for an information system.