



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91 CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI, ABUJA**  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**2020\_1 EXAMINATIONS**

**COURSE CODE: CIT734**

**COURSE TITLE: OBJECT-ORIENTED TECHNOLOGY**

**CREDIT: 3 UNITS**

**TIME ALLOWED: 2½ HOURS**

**INSTRUCTIONS: ANSWER QUESTION 1 AND ANY OTHER FOUR (4) OTHER QUESTIONS**

- Q1 a. Why does the object-oriented philosophy use methods defined inside classes; What could be the advantage (4 marks)
- b. Explain the following terms  
(i) Operator Overloading (3 marks)  
(ii) Static Polymorphism (3 marks)  
(iii) Multiple Inheritance (3 marks)
- c. What are three distinguishing features of the Java programming language (3 marks)
- d. Distinguish between public, private and protected elements in OOP (6 marks)
- 22 marks**
- Q2 a. List the three types of relationships of classes (3 marks)
- b. Briefly explain the following programming techniques  
(i) Unstructured Programming (3 marks)  
(ii) Procedural Programming (3 marks)  
(iii) Modular programming (3 marks)
- 12 marks**
- Q3. a. Briefly explain three (3) elements in the documentation of a software product (6 marks)
- b. List and describe three Software Engineering phases (6 marks)

- Q4. a. List six (6) basic software engineering principles (6 marks)  
b. Discuss three quality indicators of software products. (6 marks)

- Q5. a. Discuss the life-cycle Views of Object-Oriented Design (4 marks)  
b. Outline four (4) OOAD methodologies (4 marks)  
c. Briefly explain the concept of Modularity in software engineering (4 marks)

- Q6. a. In C++ Write the code that declares a class called Person with these data members:  
firstname, lastname, and DOB (3 marks)  
Write your own constructor and destructor for the class (3 marks)  
Use the right access modifiers for the members (3 marks)

- b. In declaring a class discuss why it is not advisable to make all data members public?  
(3 marks)