



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA
FACULTY OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE
2025_1 EXAMINATION...

Course Code: CIT 383

Course Title: Introduction to Object-Oriented Programming

Time: 2 Hours

Credit: 2 Units

Instruction: Attempt Question1 and any other two (2) Questions

Question 1

- a. Explain Inheritance, state its usefulness and give an example of its applicable area. (5 marks)
- b. Differentiate between the following:
 - (i) a constructor and a method (3marks)
 - (ii) a no argument constructor and an argument constructor (2marks)
- c. Describe two functionality of a downcasting and state its syntax (5marks)
- d. What do you understand by Operator overloading (2marks)
- e. Write the syntax for overloading the true and false operators (5marks)
- f. Describe abstract class in Java (5marks)

Question 2

- a. List and explain four benefits of bundling code into individual software objects. (8 marks)
- b.
 - i. what does it mean to say that a subclass “overrides a method” (2marks)
 - ii. Identify the various ways a subclass specializes its behaviour with respect to its superclass (3marks)
 - iii. Define a class (2 marks)
- c. Write the syntax for an abstract class in Java (5marks)

Question 3

- a. Briefly summarize any five properties of an implicit cast (5 marks)
- b. Identify the three (3) key restrictions to overloading a conversion operator (6 marks)
- c. Describe using appropriate accessor declaration, a one-dimensional indexer (9 marks)

Question 4

- a. What is method in Java and write a program to illustrate your answer. (6 Marks)
- b. Give five (5) advantages of methods in Java. (5 Marks)
- c. Define Polymorphism and give an instance of polymorphism by backing it up with some lines of codes. (9 Marks)

Question 5

- a. How does operator overloading differ from method overloading? (8 Marks)
- b. Identify any seven properties of Interface in OOP (7 marks)
- c. Enumerate the features of Encapsulation attribute in OOP (5marks)