NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Plot 91, Cadastral Zone,

NnamdiAzikiwe Expressway, Jabi, Abuja

FACULTY OF SCIENCE

CIT 383 – **Introduction to Object-OrientedProgramming -** (2 credits) – 2Hrs

Instruction: Answer Question 1 (25 marks) and any other three (15 marks each)

1 (a)(i). Mention the five popular Object Oriented Languages.   (5 marks)

1(a)(ii) With respect to object-oriented programming, explain the term "downcasting" (5 marks)

1(b) Describe the term Recursive Operator (5 marks)

1(c)Write the following acronyms in full (10 marks)
   (i)   JVM
   (ii)   DLSs
   (iii)   WWW
   (iv)   OOP
   (v)   OS
   (vi)   GB
   (vii)   FTP
   (viii)   CRT
   (ix)   ADT
   (x)   URL

     (1 mark each)

2(a) Describe the following terms: (6 marks)

(i) Local Variables and Instance Variables
(ii) Set and Get Methods

2(b)   List five main features of Object Oriented Programming(5 marks)

2(c)   Define the term 'Encapsulation'(4 marks)

3(a)   Differentiate betweena static field and an instance variable (5 marks)

3(b)   Explain the term " Object Oriented Programming Language" (5 marks)

3(c)   Describe Overloaded Method and Overridden Method (5 marks)

4(a)   What is Inheritance in Object–Oriented Programming Language? (5 marks)

4(b)   Evaluate the value of x after each of the following statement is executed (5 marks)

i. x=Math.abs(-7.5);
ii. x=Math.floor(-8.7);
iii. x=Math.ceil(6.3);
iv. x=Math.floor(4.1);
v. x=Math.ceil(-2.5);

(1 mark each)

4(c)   Outline fiveexamples of methods   (5 marks)

5(a)   Mention two advantages of software reusability (5 marks)

5(b)   Distinguish between a Class and an Object (5 marks)

5(c)   Explain the term "downcasting" (5 marks)

6(a)   Describe Operator Overloading (5 marks)

6(b)   Explain the term "polymorphism" and mention basic types (5 marks)

6(c)   Discuss Abstract Data Types and state two types (5 marks)