NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

Course Code: CIT 383

COURSE TITLE: INTRODUCTION TO OBJECT ORIENTED PROGRAMMING

Total mark is 70 and each question carries $17^{1/}_2$ marks
Answer any four (4) questions in 2 Hours

1(a)What do you understand by Recursive Operator? (4 marks)
1(b) Give the full meaning of the following acronyms:
   (i)   **OS**
   (ii)   **GB**
   (iii)   **FTP**
   (iv)   **CRT**
   (v)   ADT
   (vi)   JVM
   (vii)   DLSs
   (viii) WWW
   (ix)   OOP
           (1 mark each)
1 (c). Outline three Object Oriented Languages.($4^{1/}_2$ marks)

2a. What is Encapsulation? (4 marks)
2b. Write a short note on each of the following:
(i) Overloaded Method and Overridden Method (3 marks)
(ii) Local Variables and Instance Variables (3 marks)
(iii) Set and Get Methods (3 marks)
2c.Outline three main features of Object Oriented Programming.($4^{1/}_2$ marks)

3(a) Explain Inheritance in Object – Oriented Programming Language? (4 marks)
3(b) Evaluate the value of x after each of the following statement is executed:

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);
vi. x=Math.sqrt(400);
vii. x=Math.pow(2,5);
viii. x=Math.Min(-4,-8);
ix. .x=Math.ceil(-Math.abs(-5+Math.floor(-3.2)));
(1 mark each)

3(c) Outline three (3) examples of methods   ($4^{1/}_2$ marks)

4a.Distinguish between a Class and an Object? (8 marks)
4b. Explain the term "downcasting" (5 marks)
4c. Identify three (3) examples of methods ($4^{1/}_2$ marks)

5(a) What is Abstract Data Types? List two types (8 marks)
5(b) Explain Operator overloading. List three types of operators. (5 marks)
5(c) Outline three (3) Object-Oriented Programming Concepts ($4^{1/}_2$ marks)

6(a)Explain the term "Polymorphism" List types (5 marks)
6b. Differentiate between a Superclass and a Subclass (8 marks)
6c. Outlinethree (3) ways to call a method($4^{1/}_2$ marks)