



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**MARCH/APRIL 2015 EXAMINATION**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**Course Title:** Introduction to Object-Oriented Programming

**Course Code:** CIT 383 – (2 Credits )

**TIME ALLOWED:** 21/2 HRS

Total Score is 70 and each question carries 17<sup>1</sup>/<sub>2</sub> marks

Answer any four (4) questions in 2<sup>1</sup>/<sub>2</sub> Hours.

1a. What is the value of x after each of the following statement is executed:

- i. `x=Math.abs(-3.5);`
- ii. `x=Math.floor(-3.7);`
- iii. `x=Math.ceil(6.3);`
- iv. `x=Math.floor(4.1);`
- v. `x=Math.ceil(-2.5);`
- vi. `x=Math.pow(3,7);`
- vii. `x=Math.ceil(-Math.abs(-5+Math.floor(-3.2)));`

(1<sup>1</sup>/<sub>2</sub> marks each)

1b. List three popular Object Oriented Languages? (3 marks)

1c. Mention two advantages of software reusability ( 4 marks)

2a. What is Encapsulation? (3 marks)

2b. Give the full meaning of the following acronyms:

- (i) WYSIWYG
- (ii) OSI
- (iii) PCS
- (iv) RDO
- (v) ADT
- (vi) OOD
- (vii) JVM

- (viii) API
  - (ix) DLSs
  - (x) SNMP
- (1 mark each)

2c. List three main features of Object Oriented Programming? (4½ marks)

3a. What is Inheritance in Object – Oriented Programming Language? (5 marks)

3b. Explain the term “methods” ? (8 marks)

3c. List three (3) examples of methods (4½ marks)

4a. What do you understand by Operator Overloading? (9 marks)

4b. List two major aspects of Object-Oriented Programming that promote software reuse (4 marks)

4c. List the three (3) logical operators that can be directly overloaded for a class (4½ marks)

5a. Write a short note on each of the following:

- (i) Overloaded Method and Overridden Method
- (ii) Local Variables and Instance Variables
- (iii) Set and Get Methods

(3 marks each)

5b. What do you understand by Recursive Operator (4 marks)

5c. Mention the three (3) ways to call a method (4½ marks)

6a. What is the difference between a Class and an Object? (8 marks)

6b. Explain the term “downcasting” (5 marks)

6c. Enumerate, giving examples, any three (3) examples of Message passing styles (4½ marks)