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**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 171/2 marks

Answer any four (4) questions in 21/2 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)));

(11/2  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:

1. **WYSIWYG**
2. **OSI**
3. **PCS**
4. **RDO**
5. ADT
6. OOD
7. JVM
8. API
9. DLSs
10. SNMP

(1 mark each)

2c.List three main features of Object Oriented Programming?(41/2 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 (41/2 marks)

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

4b List two major aspect of Object-Oriented Programming that promotes software reuse

(4 marks)

4c.List the three (3) logical operators that can be directly overloaded for a class (41/2 marks)

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

1. Overloaded Method and Overridden Method
2. Local Variables and Instance Variables
3. 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 (41/2 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 (41/2 marks)