



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CIT383 (2 Credits)
COURSE TITLE: Introduction to Object-Oriented Programming

Total Score is 70 and each question carries 17¹/₂ marks
Answer any four (4) questions in 2¹/₂ Hours.

1(a) Give the full meaning of the following acronyms:

- (i) **WYSIWYG**
- (ii) **OSI**
- (iii) **PCS**
- (iv) **RDO**
- (v) **ADT**
- (vi) **OOD**
- (vii) **API**
- (viii) **URL**
- (ix) **GUI**

(1 mark each)

1(b). Differentiate between an instance variable and a static field? (4 marks)

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

2(a). What is the value of x after each of the following statement is executed:

- i. `x=Math.abs(-7.5);`
- 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(2,8);`
- vii. `x=Math.ceil(-Math.abs(-5+Math.floor(-3.2)));`

(1¹/₂ marks each)

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

2(c) Mention two advantages of software reusability (4 marks)

3(a) Write short note on the following

- (i) Inheritance
 - (ii) Encapsulation
- (3 marks each)

3(b) Explain the term “methods” (7 marks)

3(c) List three (3) examples of methods (4¹/₂ marks)

4(a) What do you understand by Operator Overloading? (7 marks)

4(b) List and explain three key restrictions to overloading the conversion operators (6 marks)

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

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

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

5(c) Enumerate, giving examples, any three (3) examples of Message passing styles (4¹/₂ marks)

6(a) 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)

6(b) Explain the term “ Object Oriented Programming Language” (4 marks)

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