

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja**

**FACULTY OF SCIENCES**

 **APRIL/MAY, 2019 EXAMINATIONS**

**COURSE CODE: CIT 383**

**COURSE TITLE:** Introduction to Object-Oriented Programming

**CREDIT: 2 Units**

**TIME ALLOWED: 2 Hours**

**INSTRUCTION: Answer Question ONE (1) and any other THREE (3) Questions**

1a Describe the activities of each of the following with respect to Object-Oriented programming

* 1. Modularity
	2. Information.
	3. Code re-use
	4. Pluggability
	5. Class.
	6. Method.

**(2 marks each)**

b. Explain the *for* syntax as is used in Java programming **(4 marks)**

c. Describe the *if* construct as is used in Java programming. Use example **(3marsk)**

d. Explain any two commutative operations used in Java programming**. (4 marks)**

e. Describe the term, unary operator overloading **(2 marks)**

2a Explain each of the following with respect to Object-oriented programming (OOP)

1. Encapsulation.
2. Inheritance.

**(3 marks each)**

2b Discus each of the following with respect to Object-oriented programming

1. Reference variable of a class: (**3 marks)**
2. Binding***.(2 marks)***

2c Briefly discuss the two types of polymorphism **(4 marks)**

3a. State any four advantages of using methods in Object oriented programming**. (8 marks)**

3b. Using example, explain each of the following as each is used in Java programming

 **(7 marks)**

1. Predefined classes:
2. User defined classes.

4a. Write a Java Program to print the message “ NOUN is a good school” and explain your

 codes**. (51/2 marks)**

b. Define:

1. Local variables **(2 marks)**
2. Instance variables **(2 marks)**

c. Create a non-executable class that has a private instance variable that can hold the first name of a student. Your class should contain methods to assign values to and retrieve values from the instance variable. Explain your program.

**(51/2 marks)**

5a. Enumerate and describe any four (4) motivations that exists using modularization. **(4 marks)**

b. Explain the following:

1. Abstract classes **(31/2 marks)**
2. Concrete classes **(11/2 marks)**
3. Abstract methods **(3 marks)**

c. Outline the three kinds of modules that exist in Java programming. (**3marks)**