



NATIONAL OPEN UNIVERSITY OF NIGERIA

University Village, Plot 91, Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi, Abuja

Faculty of Science

APRIL, 2019 EXAMINATIONS

Course: CIT 734 – OBJECT ORIENTED TECHNOLOGY

Credit Unit: 2

Time Allowed: 2 Hours

Instructions: Answer Question 1 and four (3) other questions

- Q1 a. Explain the term Object Oriented Programming (4 marks)
 b. Write short notes on the following terms?
 (i) Class (4 marks)
 (ii) Method (4 marks)
 (iii) Object (4 marks)
 c. Mention four characteristics of Java programming language (4 marks)
 d. Itemise the phases of a Software Development Life Cycle (SDLC). (5 marks)
- Q2 a. Explain the following terms:
 (i) Encapsulation (3 marks)
 (ii) Polymorphism (3 marks)
 (iii) Inheritance (3 marks)

 b. Describe, with the aid of labeled diagrams, the following relationship types in Object Oriented Programming: (6 marks)
 (i) "a-kind of"
 (ii) "a part-of"
 (iii) "has-a".
- Q3. a. Differentiate between unstructured programming, procedural programming and modular programming (6 marks)
 b. Write short notes on the following terms as used in Programming
 (i) Expression (2 marks)
 (ii) Statement (2 marks)
 (iii) Block (2 marks)
 c. Write the syntax structure **OR** a sample code for the following in C++
 (i) WHILE- loop (1 mark)
 (ii) FOR-loop (1 mark)

(iii) IF Statement

(1 mark)

- Q4. a. List six (6) important quality metrics of a software product (6 marks)
b. The documentation of the software product is an important task in software development. Explain the three most important baseline specifications. (9 marks)

- Q5. a. What do you understand by the following programming terms:
(i) Variable (3 marks)
(ii) Scope (3 marks)
(iii) Data type (3 marks)

- b. What is the output of the Java application code below: (2 marks)

```
class HelloWorldApp {  
    public static void main(String[] args) { System. out. Println ("Hello World!");  
    }
```

- c. Mention four (4) software engineering principles (4 marks)