ELIZADE UNIVERSITY, ILARA-MOKIN, ONDO STATE

FACULTY OF ENGINEERING

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

SECOND SEMESTER EXAMINATION, 20202021 ACADEMIC SESSION

COURSE TITLE: JAVA TECHNOLOGY AND PROGRAMMING

COURSE CODE: ECT 513

EXAMINATION DATE:

COURSE LECTURER: Dr. A. A. Sobowale
HOD's SIGNATURE

TIME ALLOWED: 3 HOURS

INSTRUCTIONS:

1. ANSWER FIVE QUESTIONS ONLY
2. SEVERE PENALTIES APPLY FOR MISCONDUCT, CHEATING, POSSESSION OF UNAUTHORIZED MATERIALS DURING EXAM.
3. YOU ARE **NOT** ALLOWED TO BORROW ANY WRITING MATERIALS DURING THE EXAMINATION.

Question #1
a. List six properties of Variables. [6 Marks]
b. Enumerate six rules of naming variables. [6 marks]
c. Write a Java Program to display the word "I am a student" [8 marks]

Question #2
a. What is an array? [4 Marks]
b. In a class of 20 students, write Java syntax to declare the following name, age and dept of the students

[6 Marks]

c. In a class of fifty (50) students, write a Java program to determine those that are qualified for NYSC mobilization, your program should inform the intending corps members of the following classifications:
i. First class graduates will choose their state of service.
ii. Second class upper graduates will serve in Lagos/Abuja.
iii. Second class lower will serve in their state of origin.
iv. Others will be posted.by NYSC [10 Marks].

Question #3
a. List the following;
    i. Four (4) definitions of an Object [4 Marks].
    ii. Three (3) characteristics of an Object [3 Marks].
    iii. Three (3) ways to initialize an Object in Java [3 Marks].
    iv. Five (5) elements of a Class [5 Marks].
b. Write a Java Program to print out the name of three members of your family using reference variable. [5 Marks].

Question #4
a. Enumerate five differences between Methods and Constructors in Java. [10 Marks]
b. Write a Java program to display the current account, the amount deposited and the amount withdrawn and total balance of an account. Initialize with acct no=832345, acct name="your name ". Initial balance= 1000, deposit =40,000; withdrawn= 26,000:00. [10 Marks]

Question #5
a. With a relevant program, distinguish between WHILE and Do …… WHILE Statements [5 Marks]
b. Write out the expression of the FOR statement in java explaining the functions of each component and the process flow of the components [7 Marks].
c. Write a Java program to calculate the average of odd numbers between the numbers from 1 to 50 numbers.

[8 Marks]

Question #6
a. Explain what is Object-Oriented Programming ? [4 marks]
b. Enumerate three Characteristics of Object-Oriented Programming (OOP) [6 marks]
c. Write briefly on the following [2 marks Each]
i. Encapsulation ii. Polymorphism iii. Data Abstraction iv. Inheritance v. Interface

Question #7
a. List five Relational Operators in Java [1 Mark Each]
b. Use the right Java Relational operator syntax to represent the following scenarios [1 Mark Each]
    i. Electrical Electronics Students from Ondo town
    ii. Distinction Students from Faculty of Engineering
    iii. Teenagers
    iv. Muslim female students
    v. Nigerians qualified to contest for the presidency of Nigeria
c. Enumerate five advantages of OOP over Procedure-oriented programming [10 Marks]