CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DIPLOMA IN COMPUTER SCIENCE

COSC 0244: FUNDAMENTALS OF OBJECT ORIENTED PROGRAMMING

STREAMS: CERT. COMP SCI (Y2S2)   **TIME: 2 HOURS**

DAY/DATE: THURSDAY 25/03/2021   **2.30 P.M. – 4.30 P.M**

INSTRUCTIONS:
- Answer question **ONE** and any other **TWO** questions in section B
- Do not write anything on the question paper
- This is a **closed book exam**, no reference materials are allowed in the examination room
- There will be **NO** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely.

SECTION A (ANSWER ALL QUESTIONS)

QUESTION ONE (30 MARKS)

a) Define the following terms as used in JAVA

    i.   JDK   (2 Marks)

    ii. JRE   (2 Marks)

    iii. JVM   (2 Marks)

b) Differentiate between a package and library in Object Oriented Programming   (4 Marks)

c) Explain the THREE types of access modifiers used in Java   (6 Marks)

d) With an example differentiate between an object and a class in JAVA   (6 Marks)

e) Name THREE Java Frameworks used for rapid development   (3 Marks)

f) Show how a Java Variable is declared and initialized in one statement   (5 Marks)

SECTION B (ANSWER ANY TWO QUESTIONS)

QUESTION TWO (20 MARKS)

    a) Illustrate a Java Main method with an output statement   (8 Marks)

    b) State and Explain the THREE types of errors that you are likely to encounter in object-oriented programming.   (12 Marks)

QUESTION THREE (20 MARKS)

    a) Write the syntax of Java do while loop   (6 Marks)

    b) List Five Rules of naming Identifiers   (5 Marks)

    c) Differentiate between method overloading and method overriding   (4 Marks)

    d) List the main stages of a JAVA Applet   (5 Marks)

QUESTION FOUR (20 MARKS)

    a) State and Explain FIVE types of Java operator   (10 Marks)

    b) Define the following terms as used in Object Oriented Programming

        i. Polymorphism   (2 Marks)

        ii. Encapsulation   (2 Marks)

        iii. Inheritance   (2 Marks)

    c) NAME and EXPLAIN two variable types that can be created in a class   (4 Marks)

QUESTION FIVE (20 MARKS)

    a) Illustrate how one can archive a control flow in object-oriented programming using nested IF ELSE statement   (10 Marks)

    b) Write down a JAVA method with a public access modifier explaining each part of the syntax in the method.   (10 Marks)

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