

ZIMBABWE EZEKIEL GUTI UNIVERSITY



FACULTY OF SCIENCE, TECHNOLOGY, AGRICULTURE AND FOOD SYSTEMS
DEVELOPMENT

Department of Data Science and Computer Technology

Module: DIS124 Object Oriented Programming (Java)

Exam Duration: 3 hours

Year: 2025

25 NOV 2025

Instructions

- (i) Number your answers accordingly.
- (ii) Answer **ALL Questions** in Section A and **Three(3)** Questions in Section B
- (iii) Begin each question on a new page

Section A – Theory Question –[40 marks]

Question One

- a) Explain the following features of java;
- i) Platform independence
 - ii) Portability
 - iii) Object oriented
 - iv) Distributed
- [12 marks]
- b) Identify and explain the two ways of creating a thread in Java. [8 marks]
- c) Differentiate between method overloading and method overriding in java. [6 Marks]
- d) Write a code snippet to demonstrate the concept of constructor overloading in Java. [9 marks]
- e) List any five characteristics of an abstract class in Java. [5 marks]

Section B- Practical Questions- [60 marks]

Answer any three questions from section B

Question two

Develop a Java program containing a class called Cellfi with instance variables callDuration and fixedCharge. A subclass called iCellfi defines a method calcCharge() that will calculate cellphone charge per month for an iCellfi subscriber given by callDuration * fixedCharge. Create two iCellfi objects named c1 and c2. Determine and display their monthly cellfi charges for this current month.

[20 Marks]

Question three

Write a java application program that creates a thread and start the thread. The program must also assign a name to the thread and display the name of the thread.

[20 Marks]

Question four

Write a program that allows the user to enter two numbers into two instance variables Numerator and Denominator of a class called FloatingNumbers. A method called Division() is used to determine the quotient of the two numbers. The program must handle an arithmetic exception and display the quotient.

[20 Marks]

Question five

Write a java program that create an interface called Dish with member variables monthly_subscription and amount_due and a prototype of method paySubscription().The program should implement a class called KweseTv with method paySubscription() which determines the new amount_due after paying monthly subscription. NB new_amount_due=amount_due-monthly_subscription
[20 Marks]

10/11 am