



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF SCIENCE, TECHNOLOGY, AGRICULTURE AND FOOD SYSTEMS DEVELOPMENT

DEPARTMENT OF INFORMATION SYSTEMS

EXAMINATION PAPER

COURSE CODE : DIS123
COURSE TITLE : OPERATING SYSTEMS
SPECIAL REQUIREMENTS : None
DURATION : 3 Hours
LEVEL : 1.1
DATE : 2025

24 NOV 2025

INSTRUCTIONS TO CANDIDATES:

1. You may use a calculator
2. Answer any **FOUR (4)** questions.
3. Begin each question on a new page.
4. Each question carries 25 marks.

QUESTION 1

a) Explain the following of the following:

- i. Operating system. [3]
- ii. Register [3]
- iii. Deadlock. [3]
- iv. Main memory. [3]
- v. Interrupt [3]

b) Discuss the functions of an operating system [10]

QUESTION 2

a) Describe the process of swapping in memory management [15]

b) Briefly describe the goals of scheduling in an operating system. [10]

QUESTION 3

a) Describe any five resources managed by an operating system [5]

b) With the aid of diagram, describe the 5-state process model [15]

QUESTION 4

a) Describe the concept of deadlock and how an operating system can recover from such [15]

b) Differentiate between batch processing system and real-time processing system. [5]

c) Differentiate between contiguous and non-contiguous memory allocation [5]

QUESTION 5

Outline the importance of the PCB

[10]

Compare and contrast between a process and a thread

[15]

*****END OF PAPER*****

10/1 (pm)