



**ZIMBABWE EZEKIEL GUTI UNIVERSITY**

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**FACULTY OF SCIENCE, TECHNOLOGY, AGRICULTURE AND FOOD  
SYSTEMS DEVELOPMENT**

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**DEPARTMENT OF INFORMATION SYSTEMS**

**EXAMINATION PAPER**

**COURSE CODE** : BIS125  
**COURSE TITLE** : Operating Systems  
**SPECIAL REQUIREMENTS** : None  
**DURATION** : 3 Hours  
**LEVEL** : 1.2  
**DATE** : 2025

27 NOV 2025

**INSTRUCTIONS TO CANDIDATES:**

1. This paper consists of 5 questions
2. Each question carries 20 marks
3. Answer **ALL** Questions.

### Question 1

- a. Define a distributed System. [2]
- b. Explain any **four(4)** characteristics of a distributed system [8]
- c. Define Process Control Block [2]
- d. Discuss each of the important information stored in the PCB? [8]

### Question 2

- a) Discuss any **five(5)** functions of an operating system. [10]
- b) Describe the six possible transitions among the five process states [10]

### Question 3

- a. Define an interrupt [2]
- b. Explain **four(4)** purpose of an interrupt in an operating system [8]
- c. What are the main 5 goals of process scheduling algorithms [10]

### Question 4

- a. Explain the concept of swapping in an operating system. [2]
- b. Discuss **three(3)** advantages of swapping. [3]
- c. Discuss **three(3)** disadvantages of swapping [3]
- d. Explain **three(6)** advantages of Non-Preemptive Scheduling [6]
- e. Discuss any **three(3)** page replacement algorithms [6]

on 5

Discuss any **three(3)** goals of scheduling

[6]

g. Briefly explain any three differences between paging and segmentation.

[4]

h. Explain the following operating systems structures:

i. Micro kernel structure

[5]

ii. Monolithic structure

[5]

END

10/

20

