



KAIMOSI FRIENDS UNIVERSITY
FIRST YEAR SECOND SEMESTER UNIVERSITY
EXAMINATIONS

2025 /2026 ACADEMIC YEAR

SPECIAL EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION
TECHNOLOGY & BACHELOR OF SCIENCE IN MATHEMATICS WITH IT**
COURSE TITLE: PLATFORM TECHNOLOGIES
COURSE CODE: BCS 123

DATE: 18/6/2026

TIME: 9-11AM

INSTRUCTIONS TO STUDENTS

- 1. ANSWER QUESTION ONE AND ANY OTHER TWO FROM THE CHOICES GIVEN.**
- 2. PHONES, SMART WATCHES, EAR PHONES OR ANY OTHER UNAUTHORIZED DIGITAL AND AI GADGETS AND APPLICATIONS ARE NOT ALLOWED IN THE EXAMINATION ROOM.**
- 3. ANSWER ALL QUESTIONS IN THE EXAM ANSWER BOOKLET PROVIDED.**
- 4. DO NOT WRITE ON THIS QUESTION PAPER.**
- 5. ALL KAFU EXAMINATION RULES AND REGULATIONS APPLY.**
- 6. DURATION OF EXAMINATION: TWO (2) HOURS**

KAFU observes ZERO tolerance to examination cheating.

QUESTION ONE [30 MARKS]- COMPULSORY

- i) State three differences between process and thread (3mks)
- ii) Explain any three Solutions to Critical Section Problem (3mks)
- iii) Define the following terms as relates to platform technologies (4mks)
 - a) Critical Section
 - b) Race Condition
- iv) State three roles of System Libraries (3mks)
- v) State the three roles of device drivers (3mks)
- vi) Briefly explain the race condition (3mks)
- vii) State three advantages of semaphore (3mks)
- viii) List any two types of language interpreters (2mks)
- ix) State any three Solutions to the critical section problem (3mks)
- x) List the three types of Scheduling Queues (3mks)

SECTION B

QUESTION TWO [20 MARKS]

- a) Describe any five Principles of Distributed Operating Systems (10mks)
- b) Describe the components of a Process Control Block (10mks)

QUESTION THREE [20 MARKS]

- a) Describe any four types of operating systems (10mks)
- b) Describe any three disk management techniques (6mks)
- c) State four features that a well-designed Operating System (OS) architecture ensures (4mks)

QUESTION FOUR [20 MARKS]

- a) State and explain five functions of the kernel (10mks)
- b) Load balancing is a model distributes workloads evenly across multiple computing resources to improve performance and reliability in distributed systems. Describe the four load balancing techniques (10mks)

QUESTION FIVE [20 MARKS]

- a) State and describe the five disk scheduling algorithms (10mks)
- b) Describe the three file allocation methods (6mks)
- c) Explain four advantages of network operating systems (4mks)