



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

UNIVERSITY EXAMINATIONS
2024/2025 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATION

FOR THE DEGREE OF MASTER OF SCIENCE
(INFORMATION TECHNOLOGY)

COURSE CODE : MIT 8210

**COURSE TITLE : ADVANCED ENTERPRISE
APPLICATION DEVELOPMENT**

DATE: 28/04/2025

TIME: 2.00 PM – 5.00 PM

INSTRUCTIONS TO CANDIDATES

1. Answer QUESTION ONE and ANY OTHER TWO
2. Candidates are advised not to write on the question paper
3. Candidates must hand in their answer booklets to the invigilator while in the examination room

QUESTION ONE (COMPULSORY) [20 MARKS]

Discuss with the aid of examples how advanced programming paradigms and design patterns can be applied to develop efficient and maintainable enterprise applications.

QUESTION TWO [20 MARKS]

With aid of an example of choice explain the design, development and deployment microservices-based applications using industry best practices.

QUESTION THREE [20 MARKS]

With aid an example demonstrate the Building of cloud-native applications that leverage containerization, orchestration, and serverless computing.

QUESTION FOUR [20 MARKS]

With aid of an example illustrate to Design and integrate APIs with external systems and services, ensuring efficient communication.

QUESTION FIVE [20 MARKS]

Illustrate how you can Implement advanced security measures to protect enterprise applications and data.