



**KAIMOSI FRIENDS UNIVERSITY
THIRD YEAR SECOND SEMESTER UNIVERSITY EXAMINATIONS
2025/2026 ACADEMIC YEAR**

MAIN EXAMINATIONS

SPECIAL EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE (INFORMATION
TECHNOLOGY)**

COURSE TITLE: ENTERPRISE APPLICATION DEVELOPMENT

COURSE CODE: BIT 325E/BIT 351 E

DATE: 26/6/2026

TIME: 3.00-5.00PM

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

(a) Define the following terms as used in Enterprise Application Development: (10 Marks)

- i. Enterprise Application
- ii. Middleware
- iii. Java Enterprise Edition (JEE)
- iv. Application Server
- v. Web Services

(b) Explain FOUR advantages of using the Three-Tier Architecture in enterprise systems. (8 Marks)

(c) With examples, describe FOUR modules commonly found in an Enterprise Resource Planning (ERP) system. (8 Marks)

(d) Discuss FOUR characteristics of a well-designed enterprise application. (4 Marks)

QUESTION TWO (20 MARKS)

(a) Using a well-labelled diagram, describe the Three-Tier Architecture. (10 Marks)

(b) Kaimosi Friends University plans to implement a new ERP system.

- i. Outline SIX major steps involved in ERP implementation. (12 Marks)
- ii. Identify and explain FOUR possible challenges the university may face. (8 Marks)

QUESTION THREE (20 MARKS)

(a) Explain why organizations prefer Java Enterprise Edition (JEE) for developing enterprise applications. (6 Marks)

(b) Discuss THREE JEE specifications and explain their roles in enterprise development. (9 Marks)

Examples may include:

- I. Servlets
- II. JavaServer Pages (JSP)
- III. Enterprise JavaBeans (EJB)
- IV. Java Persistence API (JPA)
- V. Java Message Service (JMS)

(c) Using diagrams, differentiate between: (5 Marks)

- I. Service-Oriented Architecture (SOA)
- II. Microservices Architecture

QUESTION FOUR (20 MARKS)

- (a) State THREE objectives of adopting an ERP system in an organization. (6 Marks)
- (b) Explain JEE platform service technologies in detail. (8 Marks)
- (c) Describe FOUR Web-Tier technologies in the JEE platform. (6 Marks)

QUESTION FIVE (20 MARKS)

- (a) Explain the concept of Enterprise JavaBeans (EJB) and its types. (6 Marks)
- (b) Describe Cloud Computing Architecture in relation to enterprise applications. (8 Marks)
- (c) Explain FIVE roles defined in the JEE platform development process. (6 Marks)