INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF BUSINESS MANAGEMENT

END OF SEMESTER EXAMINATIONS - APRIL 2025

PROGRAMME: MBA
YEAR/SEM: YEAR 1/SEMESTER 2
COURSE CODE: MBA 723
NAME: MANAGEMENT INFORMATION SYSTEMS MBA

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Section A (Compulsory Case Studies/Questions - Choose 1, 40 marks)

Question 1:

a) Explain how business intelligence tools (such as dashboards or data visualization) help managers in decision-making. (20 marks)

b) Distinguish between Management Information Systems (MIS) and Decision Support Systems (DSS) in terms of purpose, structure, and output. (5 marks)

c) Describe how data from transactional systems is transformed and used in Business Intelligence (BI) reports. (5 marks)

d) List and explain four key benefits of Management Information Systems (MIS) to business growth and competitive advantage, such as improved decision-making, operational efficiency, or customer satisfaction. (10 marks)

Question 2:

a) Define the System Development Life Cycle (SDLC) and explain its purpose. (6 marks)

b) Explain the six main phases of the SDLC and the core activity in each. (12 marks)

c) Identify two common challenges in MIS development and how to overcome them. (8 marks)

d) Explain the value of user involvement in successful system implementation. (6 marks)

e) Give one example of a failed system and the lesson learned. (8 marks)

SECTION B

Section B (12 questions, attempt any 3, 20 marks each)

Question 1:

a) Define LAN, WAN, and MAN. (6 marks)

b) Give one practical business use case for each type of network and explain the different topologies that can be used in a network infrastructure. (6 marks)

c) Analyze three major benefits that organizations gain from implementing Wide Area Networks (WANs), particularly in multi-branch or global operations. Support your answer with examples.

(8 marks)

Question 2:

a) Distinguish between internal and external threats to information system security, providing one example of each. (6 marks)

b) Explain how encryption helps protect both data in transit and data at rest. (6 marks)

c) Identify and describe two types of malware, and explain their potential impact on business operations. (8 marks)

Question 3:

a) Define an Entity-Relationship Diagram (ERD) and explain its purpose in the design of a relational database. (6 marks)

b) Describe the role of primary keys and foreign keys in maintaining referential integrity between related database tables. (8 marks)

c) Create a simple ERD to model the relationship between Students, Courses, and Enrollments, indicating key constraints. (6 marks)

Question 4:

a) Briefly explain Porter’s Five Competitive Forces Model, and describe how each force shapes industry dynamics and business strategy. (8 marks)

b) Analyze how Information Systems can be used to respond to at least three of the five forces, providing relevant examples for each. (8 marks)

c) Critically evaluate one limitation of using Porter’s model in today’s digital business environment and suggest how firms can adapt their IS strategy accordingly. (4 marks)

Question 5:

a) Define Intranets and Extranets, and clearly differentiate between the two in terms of access, users, and purpose. (8 marks)

b) Explain how organizations use Intranets to support internal communication, employee collaboration, and document sharing. Provide at least one real-world example. (6 marks)

c) Analyze how Extranets enable secure collaboration with external stakeholders such as suppliers, partners, or customers. Highlight one benefit and one potential security concern. (6 marks)

Question 6:

a) Define Transaction Processing Systems (TPS) and Management Information Systems (MIS), and explain the main functions of each within a business organization. (8 marks)

b) Describe how TPS supports operational-level management in handling routine, day-to-day transactions and activities. Include one example. (6 marks)

c) Discuss how MIS helps middle-level management in monitoring performance, generating reports, and making tactical decisions. Include one scenario where MIS would be essential. (6 marks)

Question 7:

a) Define an Entity-Relationship Diagram (ERD) and explain its purpose in database design. (6 marks)

b) Describe the three main types of relationships in ERDs with aid of a diagram of each from a university or e-commerce context. (8 marks)

c) Explain the concept of referential integrity, and describe how primary and foreign keys are used to enforce it in relational databases. (6 marks)

Question 8:

a) Explain the purpose of Structured Query Language (SQL) in relational databases. (6 marks)

b) Write SQL statements for the following:

Select all books priced over 50

Insert a new customer into a Customers table (8 marks)

c) Discuss how SQL supports decision-making in MIS by enabling data retrieval and reporting. (6 marks)

Question 9:

a) Define data quality and explain why it is critical for effective management and decision-making. (6 marks)

b) Identify and explain 8 key attributes of high-quality data. (8 marks)

c) Explain how poor data quality could negatively affect business operations. (6 marks)

Question 10:

a) Define and differentiate between data and information. Explain the role of Management Information Systems (MIS) in converting raw data into actionable insights for managers, and how this process supports effective decision-making. (8 marks)

b) Discuss the importance of high-quality information in decision-making. What characteristics make information high-quality, and how does it contribute to improved decision outcomes in an organization? (6 marks)

c) Provide an example of how MIS transforms raw data into useful information for a business decision. Explain the process of this transformation with respect to a real-world business scenario. (6 marks)

Question 11:

a) Describe the three levels of management in a business organization and give one major decision type made at each level. *(9 marks)*
b) Identify and explain the type of information system typically used at each level*(8 marks)*
c) How does communication flow between these levels to support organizational decision-making? *(3 marks)*

Question 12:

Order_ID	Customer_ Name	Product_ID	Product_N ame	Qty	Supplier_N ame
001	Alice Johnson	P101	USB Flash Drive	2	Tech Supplies Ltd
001	Alice Johnson	P102	Wireless Mouse	1	Gadgets Corp
002	Bob Smith	P103	Keyboard	1	Tech Supplies Ltd

a) Explain the concept of normalization and its main objectives in relational database design. (6 marks)

b) With reference to the table provided (or based on a hypothetical unnormalized table), identify two redundancy or update anomalies, and suggest how normalization can resolve them. (6 marks)

c) Define and clearly differentiate between First Normal Form (1NF), Second Normal Form (2NF), and Third Normal Form (3NF). Include examples to support your explanation. (8 marks)