The Open University of Sri Lanka
B.Sc. (IT) Degree Programme / B.Sc. Hons in (IT) Degree Programme
Department of Computer Science
Level 5
ISU5300 – Management Information Systems
Final Examination – 2024/2025
Duration: Two hours only (2 hours)

Date: 24.06.2025   Time: 9.30 a.m. – 11.30 a.m.

ANSWER **FOUR** QUESTIONS ONLY.

Question 01

I)   Define a Management Information System (MIS) and list its three key components.

[05 marks]

II) Describe how an MIS supports decision-making at different levels of management.

[06 marks]

III) Consider the following scenario.

A local manufacturing company is struggling to make timely decisions due to scattered data, poor reporting systems, and lack of information sharing between the departments.

Suggest two ways how an MIS could help the above manufacturing company to resolve its current issues.

[06 marks]

IV) Analyze four impacts of not using MIS effectively in a competitive business environment.

[08 marks]

Question 02

Consider the following scenario.

A logistics company uses separate software for inventory, transport, HR and customer service. Management has decided to implement an Enterprise Resource Planning (ERP) system for the company.

I)   Write what àn Enterprise Resource Planning (ERP) system is and list three key features of an ERP system.

[05 marks]

II)   Describe three benefits of integrating business processes using enterprise applications.

[06 marks]

III) Identify and briefly discuss two problems the logistics company can solve with process integration?

[06 marks]

IV) Analyze and briefly explain four challenges that companies like this will face when transitioning to enterprise-wide systems.

[08 marks]

Question 03

Consider the following scenario.

A private hospital wants to use intelligent systems to predict patients who are like to be readmitted and improve care quality.

I)   List five intelligent techniques that can be used in an MIS.

[05 marks]

II)   Explain how expert systems and neural networks support organizational decisions.

[06 marks]

III) Analyze three ethical considerations in using AI for health-related decisions.

[06 marks]

IV) Propose a framework with four key areas for the ethical use of intelligent healthcare systems.

[08 marks]

Question 04

I) Define and analyze the primary functions of Transaction Processing Systems (TPS) and Decision-Support Systems (DSS).

[05 marks]

II) How do Decision-Support Systems (DSS) help with semi-structured decisions in the retail market. Briefly explain using two facts.

[06 marks]

III) Analyze two potential drawbacks of relying heavily on Decision-Support Systems (DSS)?

[06 marks]

IV) *"Most of the information available in Management Information Systems (MIS) and Decision Support Systems (DSS) is sourced from Transaction Processing Systems (TPS)."*

Assess the validity of the above statement by providing real-world examples.

[08 marks]

Question 05

I) Define system development and briefly describe the major phases in the traditional system development life cycle (SDLC).

[05 marks]

II) Describe two alternative system-building approaches and explain how each differs from the traditional SDLC.

[06 marks]

III) Consider the following scenario.

A government department is planning to launch an e-service portal where citizens can apply for documents, track applications, and receive notifications online. The ICT team must select an appropriate system development approach.

Assume that you are the ICT team manager. Select a suitable system-building approach for the development of the proposed e-service portal and justify your choice with two reasons.

[06 marks]

IV) Analyze two advantages and two disadvantages of the above selected development approach in the context of public sector projects.

[08 marks]

Question 06

I) Identify and elaborate five common types of threats to information systems.

[05 marks]

II) Briefly explain how authentication and firewalls help protect systems.

[06 marks]

III) Discuss three appropriate control measures to protect customer data in a financial company.

[06 marks]

IV) Analyze and briefly explain four concerns of poor system security in financial companies.

[08 marks]

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