



KENYATTA UNIVERSITY
EXAMINATION FOR DIPLOMA IN INFORMATION TECHNOLOGY

SIT 027: INTRODUCTION TO INFORMATION SYSTEMS

2ND SEMESTER 2023/2024

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

QUESTION ONE (30 Marks)

- a) List 3 components that make up an information system. (3 MARKS)
- b) Give the role of a database administrator. (2 MARK)
- c) Explain the differences between data, information, and knowledge. Give an example of each. (6 MARKS)
- d) Briefly explain the concept of semi-structured decisions and give an example of a semi-structured decision that someone may encounter in daily life. (4 MARKS)
- e) Define the term 'digital divide' and explain the three stages proposed by Jakob Nielsen. (9 MARKS)
- f) Explain the key characteristics of agile methodologies in software development. (2 MARKS)
- g) Describe the purpose of system testing in the systems development life cycle (SDLC). (2 MARKS)
- h) Identify two disadvantages of purchasing software instead of building it in-house. (2 MARKS)

QUESTION TWO (20 Marks)

You work as a business analyst for a retail company that sells furniture and homeware goods through a chain of physical stores as well as an e-commerce website. The company wishes to upgrade its outdated information systems and business processes to enable omnichannel retailing capabilities and improve operational efficiency.

- a) Evaluate the key information systems components and functionalities the company should invest in to enable omnichannel retailing. (10 MARKS)
- b) As the business analyst leading this project, propose and justify the implementation approach you would recommend to the company. (10 MARKS)

QUESTION THREE (20 Marks)

Critically evaluate the ethical implications of information systems in the modern age. In your response, you should:

- a) Define 'information systems ethics' and explain its importance in the modern information age. (5 MARKS)
- b) Discuss TWO ethical issues arising from the use of modern information systems, using relevant examples. (6 MARKS)
- c) Suggest TWO strategies organisations could adopt to address ethical issues related to information systems. Justify your suggestions. (6 MARKS)

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- d) Taking an informed position, argue whether adequate legislation and policies exist currently to deal with emerging ethical concerns related to information systems, especially privacy. (3 MARKS)

QUESTION FOUR (20 Marks)

You are a business analyst consultant hired to advise a medium-sized online retailer on ways to gain competitive advantage through their business processes and information systems.

- a) Explain Porter's value chain model and discuss how information technology can be utilised in the primary and support activities to help create competitive advantage. Make reference to specific examples. (10 MARKS)
- b) Discuss how business process management (BPM) can be implemented to improve efficiency. What role can information technology play in BPM? (5 MARKS)
- c) Explain business process reengineering (BPR) and describe how it could be applied to one of the retailer's core business processes. (5 MARKS)

QUESTION FIVE (20 Marks)

You are the CIO of a large corporation that is looking to implement a new cloud-based enterprise resource planning (ERP) system.

- a) Explain how you would determine whether to purchase the ERP system from a vendor or develop it in-house. (6 MARKS)
- b) Recommend the most suitable implementation approach for the new ERP system and justify your choice. (6 MARKS)
- c) Explain three change management strategies you would use during and after the ERP implementation. (8 MARKS)