



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

DEPARTMENT OF INFORMATION SYSTEMS AND TECHNOLOGY

COURSE TITLE: Information Systems Application

COURSE CODE: COURSE CODE: ITB 9404

EXAM VENUE:

STREAM: BSC ICT

DATE : 16/4/2024

EXAM SESSION 15.00-17.00

TIME: 2.00 HOURS

Instructions:

- 1) **Answer QUESTION ONE (Compulsory) and any other two questions**
- 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**
- 4) **Mobile phones are NOT allowed in the examination room.**

Question 1 (30 marks)

- i. Define following terms (10 marks)
 - i. Information system
 - ii. Business strategy
 - iii. Business process
 - iv. Algorithmic Bias
 - v. Workflow
- ii. What challenges do organizations face when implementing new information systems? Explain with relevant examples at least **FOUR** challenges (4 Marks)
- iii. What are the key components of an information system? Mention **FOUR** and explain them? (4 marks)
- iv. What are the three main perspectives of information systems (3 marks)
- v. Most Kenyan banks are closing their ATMs. Describe how digital transformation is reshaping traditional business models with specific examples in the banking sector (4 marks)
- vi. Using Porter's competitive forces model, explain how information systems can help businesses gain competitive advantage (5 marks)

Question 2 (20 marks)

- i. What are the primary components of information systems infrastructure and how do they interact? (10 marks)
- ii. What are the most common vulnerabilities in enterprise information systems and how can they be addressed? Give **FIVE** main vulnerabilities (10 marks)

Question 3 (20 marks)

- i. How do enterprise resource planning (ERP) systems and CRM integrate different business functions across an organization? Give **FIVE** relevant scenarios with examples (10 marks)
- ii. Explain how business intelligence systems transform raw data into actionable insights for decision-makers. (10 marks)

Question 4 (20 marks)

- i. What is meant by information systems infrastructure? (2 marks)
- ii. Explain the key components of an **IS infrastructure**? (8 marks)
- iii. What is cloud computing and how does it impact IS infrastructure? Give Six impacts (12 marks)

Question 5 (20 marks)

- i. How can organizations ensure ethical data handling and usage? (6 marks)
- ii. What is **digital divide** and how does it relate to ethical and social issues in IS? (8 marks)
- iii. What are some of the legal issues that pertain to information systems? Give **SIX** issues. (6 marks)