



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**  
**DEPARTMENT OF COMPUTER SCIENCE & SOFTWARE ENGINEERING**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN**  
**SECURITY AND FORENICS/BIS**

**3<sup>RD</sup> YEAR, 2<sup>ND</sup> SEMESTER 2024/2025 ACADEMIC YEAR**  
**MAIN CAMPUS**

---

**COURSE CODE: ICB1306**

**COURSE TITLE: INFORMATION SYSTEM CONTROL AND AUDIT**

**EXAM VENUE: LAB 12**

**STREAM:**

**DATE: 25/4/2025**

**EXAM SESSION: 9.00-11.00**

**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. No mobile devices (e.g. laptops, phones. e.t.c.) are allowed into the Examination Room**

**QUESTION ONE****(30 MARKS)**

- a) Explain the importance of the Information Systems Auditing Process and discuss the key phases involved. (8 marks)
- b) Describe the role of IT governance in an organization and discuss how it contributes to effective information system control. (8 marks)
- c) Discuss the key controls that should be implemented during the Information Systems Acquisition, Development & Implementation phase to ensure security and auditability. (8 marks)
- d) Explain the concept of Business Resilience and describe the critical components of a comprehensive Business Resilience plan. (6 marks)

**QUESTION TWO****(20 MARKS)**

- a) Discuss the key principles of effective Information Asset Protection and describe the common threats to information assets. (6 marks)
- b) Explain the importance of risk assessment in the Information Systems Auditing Process and describe how it is conducted. (6 marks)
- c) Describe the key components of an effective access control system and discuss their importance in information security. (4 marks)
- d) Explain the role of data classification in protecting information assets and describe the common data classification levels. (4 marks)

**QUESTION THREE****(20 MARKS)**

- a) Describe the key audit procedures that should be performed during Information Systems Operations to ensure compliance and security. (6 marks)
- b) Explain the concept of change management and discuss its importance in maintaining the integrity of information systems. (6 marks)
- c) Discuss the key considerations when conducting a post-implementation review of an information system. (4 marks)
- d) Explain the importance of continuous monitoring in information system control and audit. (4 marks)

**QUESTION FOUR****(20 MARKS)**

- a) Describe the key elements of a comprehensive IT audit report and discuss the importance of effective communication of audit findings. (6 marks)
- b) Discuss the ethical considerations that should be taken into account by an IT auditor during an audit engagement. (6 marks)
- c) Explain the concept of IT general controls and discuss their importance in ensuring the reliability of information systems. (4 marks)
- d) Describe the key audit procedures for evaluating the effectiveness of IT security policies and procedures. (4 marks)

**QUESTION FIVE****(20 MARKS)**

- a) Discuss the key components of a disaster recovery plan and explain their importance in ensuring business continuity. (6 marks)
- b) Explain the concept of incident response and describe the key steps involved in incident handling. (6 marks)
- c) Describe the role of vulnerability assessments and penetration testing in protecting information assets. (4 marks)
- d) Discuss the importance of data backup and recovery procedures in ensuring data integrity and availability. (4 marks)

*This is the last printed page*