



# TECHNICAL UNIVERSITY OF MOMBASA

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SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF MANAGEMENT SCIENCE

**UNIVERSITY EXAMINATION FOR:**

BBIT/AUG2021/J-FT

BTIT/AUG2021/J-FT

CIS 4403: SYSTEM AUDIT AND COMPLIANCE TESTING

END OF SEMESTER EXAMINATION MARKING SCHEME

**SERIES: DECEMBER 2024**

**TIME: 2HOURS**

**DATE: 10Oct2024**

## **Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions

**Do not write on the question paper.**

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

- Define the term 'security audit' and explain its purpose in IT environments. (3 marks)
- What is the significance of audit frameworks like COBIT in managing IT governance? (3 marks)
- List three key concepts that form the foundation of IT auditing. (3 marks)
- What role does ISO 27001 play in security auditing? (3 marks)
- Differentiate between a security policy and a security standard. (3 marks)

- f) Explain the purpose of developing security policies within an organization. (3 marks)
- g) What are internal controls, and why are they important in an audit context? (3 marks)
- h) List and briefly describe two types of security policies. (3 marks)
- i) Identify and explain two benefits of implementing a structured audit framework like COBIT. (3 marks)
- j) What is an IT security risk, and provide an example. (3 marks)

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

- A. Explain the phases of the Security Systems Development Life Cycle (SDLC) where compliance checks are necessary. (4 marks)
- B. Create an audit checklist for ensuring data protection compliance during the SDLC. (8 marks)
- C. Design a sample audit test case to assess the application of data encryption in a system. (8 marks)

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

- A. Define COBIT and explain how it assists in achieving IT governance objectives. (4 marks)
- B. Develop an audit plan to review an organization's digital signature policy. (8 marks)
- C. Using COBIT, outline steps to audit a company's user access management system. (8 marks)

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

- A. Summarize the Sarbanes-Oxley (SOX) Act and its relevance in IT auditing. (4 marks)
- B. Draft a checklist to assess SOX compliance in relation to data integrity. (8 marks)
- C. Create an audit scenario to evaluate SOX compliance in data access controls. (8 marks)

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

- A. Explain the role of XML in structuring web security policies. (4 marks)
- B. Design an XML structure to represent role-based access control for an organization's web application. (8 marks)
- C. Write an audit test case to evaluate XML-based access control policies within an application. (8 marks)