



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATION SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
INFORMATION AND COMMUNICATION TECHNOLOGY
1ST YEAR 1ST SEMESTER 2013/2014 ACADEMIC YEAR
REGULAR

COURSE CODE: IIT 3113

COURSE TITLE: PC SECURITY AND PRIVACY

EXAM VENUE: LR 2

STREAM: (BSc. ICT)

DATE: 15/04/14

EXAM SESSION: 2.00 – 4.00 P

TIME: 2.00 HOURS

Instructions:

- 1. Answer question 1 (Compulsory) and ANY other 2 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.**
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QUESTION ONE 30 MARKS

- a) What are the security goals? Explain why the balance among different goals is needed (5 marks)
- b) In the context of control and security of a system, what is a target system? (5 marks)
- c) Name the people affected in a security policy. (5 marks)
- d) Describe some of the risk exposures in information systems. (5 marks)
- e) State the five elements of an internal control process (5marks)
- f) What are internal control objectives (5 marks)

QUESTION TWO 20 MARKS

- a) What are security controls?
- b) Access control security measures ensure that only data that is authorized enters and leaves a computer system. Discuss
- c) To help review or design security controls, they can be classified by several criteria. Outline and explain these criteria

(4+8+8 Marks)

QUESTION THREE 20 MARKS

- a) Discuss any FOUR environmentally related problems that can affect the performance of a computer and suggest any remedies to these problems.
- b) State the principle of least privilege? Why is it important?
- c) Please classify each of the following as a violation of (A) confidentiality, (B) integrity, (C) availability, (D) non repudiation
 - i. A copies B's homework
 - ii. A crashes B's operating system
 - iii. A changes the amount on B's cheque from KES 100,000 to KES 1,000,000

- iv. A forges B's signature on a land acquisition contract
- v. A registers the domain name **jooust.ac.ke** and refuses to let the University to buy or use the domain name

(8+7+5 Marks)

QUESTION FOUR 20 MARKS

- a) Outline some of the vulnerabilities of Personal computers
- b) An Audit trail is not a means of protection but more an after the fact means of tracking what has been done. Discuss
- c) What are the steps taken in risk analysis

(6+6+8Marks)

QUESTION FIVE 20 MARKS

- a) Explain your role as a user in protecting your personal computer
- b) Weak Passwords are one of the vulnerabilities most frequently targeted by someone trying to break into a system. Discuss
- c) What is phishing and how is it a security threat
- d) State five biometric security controls and explain how they work

(5+5+5+5 marks)