



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR SCIENCE IN
SECURITY AND FORENICS**

4th YEAR 1st SEMESTER 2022/2023 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: ICB 1409

COURSE TITLE: NETWORK MANAGEMENT AND SECURITY

EXAM VENUE:

STREAM:

DATE:

EXAM SESSION:

TIME: 2.00 HOURS

INSTRUCTIONS:

- 1. Answer Question 1 (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**

QUESTION ONE

- a) What do you understand by the term route selection? **(2marks)**
- b) Distinguish between OSPF and RIP protocols? **(2marks)**
- c) Briefly explain what you understand by buffering and windowing as data flow control technique? **(4marks)**
- d) Distinguish between POP, IMAP and SMTP **(3marks)**
- e) Why do we conduct baseline in managing a network **(2marks)**
- f) Briefly explain four advantages offered by server clustering **(4marks)**
- g) Distinguish between Remote Access VPN and Site-to-site VPN **(4marks)**
- h) Which test involves pushing the network beyond its limits, often taking down the network to test its limits and recovery procedures? **(1mark)**
- i) State the three distinct types of tests that network administrators use for testing networks **(3marks)**
- j) Which network-performance optimization technique can delay packets that meet certain criteria to guarantee usable bandwidth for other applications? **(1mark)**
- k) Briefly explain some of the types of information and functions that network management tools can provide **(4marks)**

QUESTION TWO

- a) You are requested to develop a network policy for you organization briefly discuss some of the factors that you will cover **(10marks)**
- b) Briefly explain the three categories under which network documentation fall **(6marks)**
- c) Briefly explain the four components found in a baseline information **(4marks)**

QUESTION THREE

- a) Explain three reasons as to why you would want to carefully manage whatever amount of precious bandwidth you've got. **(6marks)**
- b) The CEO of your company reports that of late the networks has been terribly slow. As The network administrator briefly explain how you would solve problem **(4marks)**
- c) Briefly state and explain five threats a poorly designed network would face **(10marks)**

QUESTION FOUR

- a) State and briefly explain at least 5 advantages associated with subnetting as a way of securing a network infrastructure **(10marks)**
- b) State and explain two types of media interference can adversely affect data transmissions over a cabled network media. **(4marks)**
- c) State the basic purpose of QoS. **(1marks)**
- d) What cable issues should you know and understand for network troubleshooting? **(5marks)**

QUESTION FIVE

- a. Although networks might have different policies depending on their needs, there some common policies that cut across most networks briefly any five that you are aware of **(10marks)**
- b. Briefly explain the Major Threats against Network Security **(10marks)**