



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION TECHNOLOGY
DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
DICT/JAN2010/DIT/JAN2010

EIT 2301: NETWORK I

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: MAY/JUNE 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions in **TWO** sections **A & B**

Answer any **THREE** questions. Question **ONE** is Compulsory

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

SECTION A (Compulsory - 30 marks)

Question One (30 Marks)

- a) By using well labeled diagrams. Explain the following types of network topologies (20 marks)
- i) Star topology
 - ii) Bus topology
 - iii) Mesh topology
 - iv) Ring topology
 - v) Hybrid topology
- b) Highlight **FOUR** functions of a network adapter (4 marks)
- c) Explain **TWO** ways of knowing the physical address of a client machine (4 marks)
- d) Name **TWO** uses of a cross over cable (2 marks)

SECTION B (Answer any TWO questions – 40 Marks)

Question Two (20 marks)

- a) Describe **FIVE** common security threats faced by an organization's computer-based network systems (10 marks)
- b) Explain **FIVE** techniques that a company can employ in reducing the threats in (a) above (10 marks)

Question Three (20 marks)

- a) State and explain any **FIVE** network trouble shooting commands (10 marks)
- b) A certain student was typing his project in one of the computers in the lab. When he wanted to print his project, he was told that there was no working printer in that particular lab. He came with a flash disk and CD so that he could transfer his project from the computer he was using into these storage devices but unfortunately, he found that the USB ports and the CD ROM are not working. As a student of IT give him two solutions for his problem. (4 marks)
- c) As an IT manager of Red Systems Ltd, a company of 100 staff and 6 departments, you intend to propose to management on the use of a Local Area Network (LAN). Explain three advantages of LAN (6 marks)

Question Four (20 marks)

- a) When a system has a permanent part and a removable part (such as a CD-ROM drive and the CDROM), it is important that the system be standardized, so that different companies can make both the permanent and removable parts and everything still works together. Give three examples outside the computer industry where such international standards exist and three areas outside the computer industry where they do not exist. (6 marks)
- b) Assuming that all routers and hosts are working properly and that all software in both is free of all errors, is there any chance, however small, that a packet will be delivered to the wrong destination? Explain? (2 marks)
- c) State and explain **SIX** essential duties of a network administrator (12 marks)

Question Five (20 marks)

- a) A network performance refers to how efficiently the network responds to users' needs. State and explain **FIVE** reasons as to why network administrators do hate performance problems. (10 marks)
- b) Define the following terms as used in networking (10 marks)
- i) Gateway
 - ii) Latency
 - iii) Packet
 - iv) Brouter
 - v) Node