



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE

**CERTIFICATE IN INFORMATION MAINTENANCE &
NETWORK TECHNOLOGY (CMNT)**

FINAL EXAMINATIONS

APRIL/MAY 2010 SERIES

**DATA COMMUNICATION AND
NETWORKING/INFORMATION PROCESSING**

TIME: 2 hours

INSTRUCTIONS TO CANDIDATES

Question one (1) is **COMPULSORY** and Answer
any other **TWO (2)** Questions in **Section B.**

Question ONE

- (a). Explain the classification of computers in terms of generations. **(12 Marks)**
- (b). Distinguish between digital computers and analog computers. **(4 Marks)**
- (c). Briefly explain the following terms as used in networking:
- (i). Broadband
 - (ii). Baseband
 - (iii). Half duplex
 - (iv). Asynchronous bit transmission
- (8 Marks)**
- (d). State the functions of the following specialized servers:
- (i). Web Server
 - (ii). File and Print Server
 - (iii). Application Server
- (6 Marks)**

SECTION B

Question TWO

- (a). With the aid of a diagram, explain the hardware components of a computer. **(12 Marks)**
- (b). Explain any **FOUR (4)** advantages of using computers. **(8 Marks)**

Question THREE

- (a). Define the term 'Computer Network'. **(2 Marks)**
- (b). Explain the following Networks Topologies.
- (i). Star
 - (ii). Bus
 - (iii). Ring
- (12 Marks)**
- (c). Explain **FOUR (4)** advantages of Networking. **(8 Marks)**

Question FOUR

- (a). With the aid of a diagram describe the construction of a Coaxial Cable. **(4 Marks)**
- (b). Explain the advantages of implementing server based as opposed to peer-to-peer network. **(4 Marks)**
- (c). State the **FOUR (4)** major tasks of a Network administrator. **(4 Marks)**
- (d). Define the following terms as used in networking:
- (i). Throughput
 - (ii). Data packets
 - (iii). Crosstalk
 - (iv). Attenuation
- (8 Mark)**

Question FIVE

- (a). Explain briefly **THREE (3)** reasons for a computer not being able to access network resources from a server. **(6 Marks)**
- (b). Using an application for each, explain the following terms:
- (i). Packet switching
 - (ii). Circuit switching
- (8 Marks)**
- (c). Describe the **THREE (3)** Common Media Access Methods used to regulate the usage of transmission Media in networking. **(6 Marks)**