# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE 

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF COMPUTER SCIENCE \& INFORMATION TECHNOLOGY

CERTIFICATE IN COMPUTER MAINTENANCE \& NETWORK TECHNOLOGY CMNT 2K 11M

## ECT 1101: NETWORK ESSENTIALS

END OF SEMESTER EXAMINATIONS

SERIES: AUGUST/SEPTEMBER 2011

TIME: 2 HOURS

[^0]
## Question 1

a) How does the Client computer differ from the Server computer?
b) (i) What determines a network Topology
(ii) Give TWO advantages of Mesh Topology
c) Explain how can one install a wireless network from an existing cabled LAN network?
d) Describe the following types of Network
(i) Metropolitan Area Network (MAN)
(ii) Wide Area Network (WAN)
e) Distinguish between a REPEATER and a SWITCH?
f) International organization for standardization (ISO) is a federation for more than 100 standards organization throughout the world, explain why should these organizations dedicate so much time and funds in setting up standards for the network devices (4 marks)
g) Mr. Samba's LAN network consists of 3 Personnal Computers, One switch and a radio unit for the Internet from the ISP (Internet Service Providers)
(i) How many nodes are in this LAN network
(ii) How are the nodes uniquely identified according to the manufacturer's standardization
h) List FIVE components of server computer

## SECTION B (ANSWER ANY TWO QUESTIONS)

This section consists of $\mathbf{F O U R}$ questions 20 marks each.
Choose any two questions

## Question 2 (20 marks)

Kamunyi is using a LAN network very comfortably with Ethernet Standards, (100 base TX), His son Solomon wants to connect to this network, however solomon's office is at the $20^{\text {th }}$ floor of the same building from Kamunyi's approximately 150 meters away, when he was connected directly to his father's Network he could not get any signals. The cable is correctly installed and the Operating System in his machine was rightly configured.
(i) What could be the problem with this network connection
(ii) How can he fix this problem using the same media of transmission
(iii) Give FOUR benefits that Solomon will enjoy after successfully connecting to Kamunyi’s

LAN Network?

## Question 3 (20 marks)

Suppose you are the IT Manager of X Company, the company board of directors has resolved that they should be having a LAN network, connecting employees machines, but first and foremost they want to install a SERVER
(i) What advice would you give them before they buy that particular server
(ii) Give FOUR examples of Network Operating Systems (NOS)

## Question 4 (20 marks)

Explain in details the functions of the Data Link Layer in the Open System Interconnection (OSI) Model

## Question 5 (20 marks)

a) Name FIVE protocols at the Application Layer level of OSI model
b) Give ONE function of each of the above protocol
c) Describe THREE server form factors


[^0]:    Instructions to Candidates:
    This paper consist of TWO sections A and B
    Answer question ONE (COMPULSORY) and any other TWO questions from the list below
    This paper consists of THREE printed pages
    SECTION A COMPULSORY (30 MARKS)

