



# 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 10A)

**EIT 1116: NETWORK DESIGN & IMPLEMENTATION**

**END OF SEMESTER EXAMINATIONS**

**SERIES: AUGUST/SEPTEMBER 2011**

**TIME: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer booklet*

Answer question **ONE (COMPULSORY)** in section **A** and any other **TWO** questions from section **B**

This paper consists of **THREE** printed pages

## **SECTION A (30 marks)**

### **Question 1**

- a) A certain student in IT class was crimping a cross over cable in a computer lab. Copy and complete the table below for him (10 marks)

Pin	Connector A	Connector B
Pin 1		White Orange
Pin 2		
Pin 3		
Pin 4		Blue
Pin 5	White Blue	
Pin 6		
Pin 7	White Brown	
Pin 8	Brown	Brown

- b) Highlight **SIX** function of a network adapter (6 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)
- e) As an IT manager of Kenya Ports Authorities, a company of 100 staff and 6 departments, you intend to propose to management on the use of a Local Area Network (LAN). Explain **FOUR** advantages of LAN (8 marks)

## **SECTION A (40 marks)**

### **Question 2**

- a) State and explain **FIVE** factors one should consider when choosing a physical topology for a network (10 marks)
- b) Highlight **FIVE** essential duties of a network administrator (10 marks)

### **Question 3**

- a) Define the following terms as used in networking (10 marks)
- (i) Gateway
  - (ii) Latency
  - (iii) Packet
  - (iv) Router
  - (v) Node
- b) Network managers need certain tools to get their jobs done. Managers of big complicated, expensive networks need big, complicated, expensive tools. Managers of small networks

need small tools. Some of the tools that the managers need are hardware tools, state and explain any **FIVE** such kinds of tools. (10 marks)

#### Question 4

- a) Discuss the **FOUR** basic topologies in terms of administration and management (16 marks)
- b) Differentiate between domain and work group. (4 marks)

#### Question 5

- a) Name and explain any **FOUR** TCP/IP diagnostic commands (12 marks)
- b) A certain student was hovering the mouse cursor over the network status icon in the notification area of the taskbar. Then a balloon appeared to indicate the state of connection. By mistake he clicked the status icon and following network connection dialog box appeared.

Explain the meaning of the following items of information (8 marks)

- (i) Status
- (ii) Duration
- (iii) Speed
- (iv) Activity