



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

BTITSEP 2015 & BTITSEP 2015

EIT 4201: NETWORK DESIGN & IMPLEMENTATION

BIT 2116: NETWORK DESIGN & MANAGEMENT

SPECIAL SUPPLEMENTARY EXAMINATION

SERIES:AUGUST2016

TIME:2HOURS

DATE:Pick DateSep2017

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- Every network has requirements. Explain any **five** networking devices that you will find if you visit any company with a network system. (10 marks)
- A user on your LAN requests a web page that consists of some text and 3 images. The browser's cache is empty. For this page, what will the client's browser do? (4 marks)
- Differentiate between UDP and TCP protocols. (6 marks)
- Differentiate between IPv4 and IPv6. (2 marks)
- A certain student in IT class was crimping a cross over cable in a computer lab. Copy and complete the table below for him. (8 marks)

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

Pin 8	Brown	Brown
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Question TWO

- a) Highlight **four** factors that can push for the demand of more bandwidth in a network. (4 marks)
- b) What are the **two** main advantages of layering the protocol stack? (4 marks)
- c) Explain any **three** tools that can be use to find errors in a network. (6 marks)
- d) Define Network configuration management and highlight any **five** concerns of a network configuration management. (6 marks)

Question THREE

- a) A consumer calls you and reports that one of his computers is not communicating with other computers on the LAN. You need to view the IP address information. Outline **two** methods that you can use to view this information. (4 marks)
- b) Explain any **two** advantages and any two disadvantages of peer-to-peer networking. (4 marks)
- c) Explain in details the **two** purposes of a proxy server. (4 marks)
- d) Explain in detail how can one install a wireless network from an existing cabled LAN network? (8 marks)

Question FOUR

- a) Topologies associated with LANs are: the bus, ring and star topologies. Describe **each one**, highlighting their strengths and weaknesses from a reliability point of view. (12 marks)
- b) Highlight **four** advantages of fiber optics as a transmission media over the Unshielded Twisted Pair. (4 marks)
- c) State and explain any **two** transmission impairments. (4 marks)

Question FIVE

Network management refers to installation and support of networks and its hardware and software recourses. Explain using a diagram network design and implementation cycle. (20 marks)