TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
(BTIT 13S/J-FT)

EIT 4107: NETWORKING ESSENTIALS

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: JULY 2014
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
Attempt question **ONE (COMPULSORY)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One (Compulsory)

a) (i) Describe coaxial cable with the aid of a sketch.
(ii) State the application of coaxial cable **(6 marks)**

b) Describe any THREE form of computer classification. **(6 marks)**

c) Describe any THREE advantages of installing a network bridge in a network. **(6 marks)**

d) Distinguish between data rate and band rate. **(4 marks)**

e) Differentiate between mesh and fully connected topology. **(4 marks)**

f) Explain any FOUR major proprietary network environment that led to the development of network standards. **(4 marks)**

Question Two

A company has been formed out of three companies A, B & C that merges to form one company. The three companies had each a computer network that was different from the computer network in the other two companies.

Company A had a Star network

Company B had a bus topology

Company C had a ring topology

Required:

a) Evaluate the reason that led each company to select the network that they used. **(9 marks)**

b) Analyze the possible benefits (advantages) each company had by using the said network topology. **(5 marks)**

c) Analyze the possible challenges each one faced for using the said topology. **(6 marks)**

Question Three

A company wishing to invest in computer network is planning to install network devices and is looking for advice on the function of the following devices. Router, server, switch, MODEM, Mux. Required:

Discuss the function of the above named network devices. **(20 marks)**

Question Four

a) (i) Define network standard **(2 marks)**
(ii) Compare and contrast the operation of TCP/IP protocol suite against OSI reference model. **(18 marks)**

Question Five

a) Describe FIVE power losses in optic fibre **(10 marks)**

b) Describe any FIVE connector losses in fibre optics **(10 marks**