TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY (DICT)

EIT 2106: NETWORK ESSENTIAL

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
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** and any other **TWO** questions
Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

a) Explain the THREE types of networks that can be derived from classification of networks by range. **(4 marks)**

b) Briefly explain the following terms as used in networking:
   (i) Base band
   (ii) Broad band
   (iii) Half duplex
   (iv) Asynchronous bit transmission **(4 marks)**

c) Explain briefly the following physical topologies:
   (i) Ring
   (ii) Star
   (iii) Bus **(6 marks)**

d) State the functions of the following specialized servers:
   (i) File and print server
   (ii) Application server **(6 marks)**

Question Two

a) Explain the advantages of implementing server based as opposed to peer-to-peer network. **(4 marks)**

b) Using a diagram, describe the construction of an optical fiber cable. **(4 marks)**

c) Explain FOUR factors to consider when choosing network cable. **(4 marks)**

d) Define the following terms as used in networking: **(8 marks)**
   (i) Interoperability
   (ii) Throughput
   (iii) Data packets
   (iv) Cross talk

Question Three

a) State the FOUR major tasks of a network administrator **(4 marks)**

b) Explain briefly FOUR reasons for a computer not being able to access resources from a server **(8 marks)**

c) State the SIX roles of protocols **(6 marks)**

d) State the functions of the following protocols:
   (i) TCP
   (ii) FTP **(2 marks)**

Question Four

a) Identify FOUR physical threats to computer network that organizations need to safeguard. **(4 marks)**

b) With the aid of a diagram, describe the use of a bridge and a router in a local area network. **(8 marks)**

c) Differentiate between CSMA/CD and CSMA/CA. Contention medium access control method. **(8 marks)**

Question Five

a) Explain at least FOUR importance of layering the ISO-OSI reference model. **(8 marks)**

b) With the aid of diagrams show how a ring network can be implemented as a physical-star, logical-ring using a multi-station access unit. **(8 marks)**

c) Using a diagram describe the construction of a coaxial cable. **(4 marks)**