THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
DIPLOMA IN INFORMATION TECHNOLOGY
(DIT/DICT 10A/11M)

EIT 2207: NETWORKING ESSENTIALS

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2012
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
 -   *Answer Booklet*
This paper consist of **FIVE** questions

Answer 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) During a Networking Lesson the following terms were mentioned:
   (i) IP address
   (ii) Subnet
   (iii) Subnet mask
   (iv) Proxy server
   (v) Router

   Explain each of the above terms. **(10 marks)**

b) Differentiate between peer-to-peer and server based Networks under the following topics:

   (i) Number of users
   (ii) Administration
   (iii) Security
   (iv) Cost **(10 marks)**

Question Two

a) (i) With the aid of a diagram, describe the coaxial cable. **(5 marks)**
   (ii) Differentiate between thick coaxial cable and thin coaxial cable. **(5 marks)**
b) Draw the Token ring frame and explain the function of each component of the frame. **(10 marks)**

Question Three

a) Describe at least **FIVE** roles of protocols. **(10 marks)**
b) Explain the functions of the following specialized servers:
   (i) DNS Server
   (ii) DHCP Server
   (iii) Proxy Server
   (iv) E-mail server **(10 marks)**

Question Four

a) Using examples differentiate between the following:
   (i) Serial Transmission and Parallel Transmission
   (ii) Synchronous Serial Transmission and:
   (iii) Asynchronous Serial Transmission **(10 marks)**

b) Explain at least **FIVE** limitations of Microwave Satellite Communications. **(10 marks)**

Question Five

a) Explain at least **FIVE** importance of layering the ISO-OSI 7 Layer Reference Model. **(10 marks)**
b) Using a diagram describe how the TCP/IP protocol stack fits in the ISO-OSI 7 Layers Reference Model **(10 marks)**