THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

DIPLOMA IN TELECOMMUNICATION & INFORMATION ENG
DIPLOMA IN COMPUTER NETWORKS ENG

EEN 33207:COMPUTER NETWORKS II

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)** and any other **TWO** questions
This paper consists of **THREE** printed pages

Question 1 (Compulsory)

a) Describe the following terms as used in computer networking

   i)   Subneting
   ii) Subnet mask   (4 marks)

b) Windows server 2003 includes several built in groups that have special capabilities. Outline any **TWO** such groups   (4 marks)

c) State and describe any **THREE** basic TCP/IP services   (9 marks)

d) State and explain the function of at least **THREE** parameters that have to be configured for a computer to communicate in a TCP/IP network environment   (9 marks)

e) Outline the **TWO** commonly used password policies in a network operating system
                                                                                            (4 marks)

Question 2

a) Outline in **FIVE** steps how a client computer that is configured to use DHCP obtains its TCP/IP configuration from a DHCP server   (10 marks)

b) (i) Explain how a DHCP client can be made to receive same IP address continuously

   (ii) State and explain any **TWO** tools used to locate unauthorized DHCP servers on a network.   (4 marks)

c) (i) Describe any **TWO** types of backups employed by windows 2003 server Network Operating System
   (ii) Describe the role of the archive bit as used in Windows 2003 server back-up Process   (6 marks)

Question 3

a) (i) Outline the role of the DNS server in a given computer network
   (ii) You fire up your web browser and type www.google.com into the address bar outline the

   Process of name resolution   (15 marks)

b) (i) Explain the role of security auditing as used with the Windows 2003 server operating System.
   (ii) State and describe **TWO** audit policies used on windows 2003 Operating System
                                                                                            (5 marks)

Question 4

a) State any **TWO** roles played by the windows 2003 server, on a network based on security requirements

b) (i) Windows server 2003 includes several built-in groups that have special capabilities, State and describe any **TWO** such groups

   (ii) Outline **TWO** commonly used password policies in a windows 2003 server Networking environment   (6 marks)

c) (i) State and explain any **THREE** basic permissions types used in windows 2003 Server Operating System environment

   (ii) Describe the concept of inheritance as used in file and folder permissions

   (iii) Outline any **TWO** advantages of NTFS filing system over FAT 16 and FAT 32 Filing systems   (12 marks)

Question 5

a) (i) Describe the following concepts in relation to Network Operating Systems

   (a) Multi-processing
   (b) Multi-threading

   (ii) Windows 2003 Server is categorized into a series of server operating systems. State any **TWO** such categories, outlining **ONE** attribute that makes it unique from the rest of the members of the series   (8 marks)

b) Outline **TWO** advantages of using Active Directory over using local user and group accounts in an environment with many servers   (4 marks)

c) Briefly describe the following components of Active Directory structure   (8 marks)
   i) Sites
   ii) Domains
   iii) Organizational units
   iv) Forests