



# **THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE**

***Faculty of Engineering and Technology***

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

## **DIPLOMA IN TELECOMMUNICATION ENGINEERING**

**EET 33207**

**COMPUTER NETWORKS II**

SEMESTER 6 EXAMINATIONS

**SERIES:** FEBRUARY 2011 SERIES

**TIME:** 2 HOURS

**Instructions to Candidates:**

Answer Question **ONE (COMPULSORY)** and any other **TWO** Questions.

**(COMPULSORY)**

**Question ONE**

- a) Define the following terms as used in computer networking (2 marks)
- i) Subnetting
  - ii) Subnet mask
- b) Outline **FOUR** advantages of the process of subnetting in a computer network. (8 marks)
- c) Subnet the following IP network addresses.
- i) Class C network address 192.168.10.0. using subnet mask **255.255.255.128 (/25)**
  - ii) Class B network address 172.16.0.0. using subnet mask **255.255.192.0 (/18)**
  - iii) Class A network address 10.0.0.0 using subnet mask **255.255.255.192(/26)**. (12mks)
- d) Outline the role the Domain Name Service in a computer network. (2 marks)
- e) Briefly describe the DNS process whenever you fire up your Web browser and type [www.mombasapoly.com](http://www.mombasapoly.com) into the address bar. (6 marks)

**(ANSWER ANY OTHER TWO QUESTIONS)**

**Question TWO**

- a) Windows Server 2003 includes several built-in groups that have special capabilities. Outline TWO such groups. (4 marks)
- b) Outline the TWO most commonly used password policies in a network operating system. (4 marks)
- c) Explain the purpose of security auditing in a network operating system. (2 marks)
- d)
- i) Outline the purpose of active directory in server based network environment.
  - ii) Outline THREE advantages of using active directory over using local user and group accounts in an environment with many servers.
  - iii) Define the term Organizational Unit. (10marks)

**Question THREE**

- a) State and Describe THREE basic TCP/IP services. (9 marks)

- b) State the FOUR parameters that have to be configured for TCP/IP to function in any given network environment. (2 marks)
- c) i) Describe Distributed File System service (DFS). (1 mark)  
ii) Giving appropriate examples, outline FOUR advantages of using Distributed File System (DFS). (8 marks)

#### **Question FOUR**

- a) i) Define the term SYSTEM STATE as used in back up and recovery.  
ii) Outline the role of the archive bit in a back up setting.  
iii) State and describe at least THREE different types of backups that Windows Backup supports and their effects on the archive bit. (10marks)
- b) i) Describe the purpose of security auditing as used in windows 2003 server environment.  
ii) Describe at least FOUR Audit policies. (10marks)

#### **Question FIVE**

- a) i) Describe the process of obtaining TCP/IP configuration by a client computer that is configured to use DHCP.  
ii) What happens when a network contains two DHCP servers? (10marks)
- b) i) How can you prevent users from connecting a dial-up connections during business hours? (2 marks)  
ii) State and describe the FOUR groups into which security policies on a local computer are organised. (8 marks)