KENYA METHODIST UNIVERSITY

END OF 2ND TRIMESTER 2010 EXAMINATIONS

FACULTY   :   **SCIENCE AND TECHNOLOGY**
DEPARTMENT   :   **COMPUTER SCIENCE & BUSINESS INFORMATION**
UNIT CODE   :   **CISY 331**
UNIT TITLE   :   **NETWORK ADMINISTRATION I**
TIME   :   **2 HOURS**

Instructions: Answer **question one** and any other two questions from **section B**

SECTION A – Answer ALL question in this section

Question One (30 marks):

1) Briefly describe the following terms as used in network administration:

   a) Proxy server

   b) Loopback address

   c) Network mask   (6 marks)

2) Briefly outline the three main roles played by the network adapter card (NIC) in network communication.   (3 marks)

3) What is the role of DHCP in network administration?   (2 marks)

4) Distinguish between a static and dynamic IP addresses.   (2 marks)

5) State and briefly explain the two parts of an IPv4 address   (4 marks)

6) Windows server 2003 supports two licensing modes. Distinguish between these two modes

                                                                    (2 marks)

7) What is Internet Connection Sharing (ICS)?   (2 marks)

8) State and briefly describe the two protocols used in the implementation of IP security. (4 marks)

9) Consider the subnetted IPv4 network address 243.9.16.0/19. Determine the network mask and address range for the address   (5 marks)

SECTION B – Answer ANY TWO questions in this section

Question Two (20 marks):

1) Briefly describe the three main private address blocks as defined by RFC 1597   (6 marks)

2) Briefly describe the following roles in network administration:

    a) Network manager

    b) Security technician   (4 marks)

3) IPv6 addresses differ from IPv4 in several aspects. Describe any two of the differences

     (4 marks)

4) Distinguish between a domain and a workgroup   (2 marks)

5) Briefly describe the following WINS server configuration options:

    a) Renewal interval

    b) Extinction interval.   (4 marks)

Question Three (20 marks):

1) Briefly describe how you would create a new user account in windows server 2003   (5 marks)

2) State any three network services for windows clients   (3 marks)

3) Define network security, and state any two threats to network security.   (4 marks)

4) Briefly describe the following terms as used with active directory service;

    a) Organizational unit

    b) Non-transitive trust   (4 marks)

5) Firewalls can be configured either as circuit level proxies or packet level proxies. Briefly describe these two options.   (4 marks)

Question Four (20 marks):

1) Distinguish between Basic NAT and PAT   (2 marks)

2) Briefly describe the role played by Microsoft IIS in a windows based network.   (2 marks)

3) The typical network administration workload is divided into three categories. State the three categories   (3 marks)

4) Briefly describe the role played by Internet Connection Sharing in a Windows based network

     (2 marks)

5) DHCP in windows server 2003 is made up of three basic components. State and briefly describe the components   (6 marks)

6) A key enhancement to DHCP in windows server 2003 is the integration of DHCP with DNS;

    a) What is the importance of this integration?   (2 marks)

    b) Outline the three options for avoiding failed DNS lookups for DHCP-registered clients when using static DNS service   (3 marks)