KENYA METHODIST UNIVERSITY

END OF 2ND TRIMESTER 2010 EXAMINATIONS

SCHOOL	**:**	**SCIENCE & TECHNOLOGY**
DEPARTMENT	**:**	**COMPUTER SCIENCE AND BUSINESS INFORMATION**
UNIT CODE	**:**	**CISY 435**
UNIT TITLE	**:**	**NETWORK ADMINISTRATION II**
TIME	**:**	**2 HOURS**

INSTRUCTIONS

***Answer question 1 and any other TWO from the four questions set.*

***Marks are awarded for clear and concise answers.*

Question 1[Compulsory]

(a) What do you understand from the term proxy server and how does it execute its functions [4 marks]

(b) While explaining what a port number is, explain how they work and how they are implemented in LINUX [5 marks]

(c) What is Spam and what is the role of enabling Sendmail feature (in UNIX) in controlling Spam [4marks]

(d) Samba is a UNIX type server which shares files in the CIFS/SMB format. What is CIFS/SMB and how useful is this format [3 marks]

(e) What is the difference between Intrusion detection system and network monitoring system [3 marks]

(f) Technical support can happen through various media. Give four examples [4 marks]

(g) What skills should a system administrator have? Give two. [2 marks]

(h) Using NDS security y pyramid, briefly explain the order and concepts of NDS security [5 Marks]

Question 2

(a) The most common use of a digital certificate is to verify that a user sending a message is who he or she claims to be, and to provide the receiver with the means to encode a reply. Briefly describe the process of obtaining the certificate and how the above mentioned TWO tasks are achieved. [5 marks]

(b) What are Virtual private networks (V.P.N) and what makes them preferable in terms of security in a large organization [3 marks]

(c) Briefly describe the following attacks explaining how they can be avoided [6 marks]

(i) Exploitation of known weaknesses in programs
(ii) Denial of service
(iii) Spoofing

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(d) What do you understand from the term firewall in network security [1 mark]

Question 3

(a) When IP addressing first came out, everyone thought that there were plenty of addresses to cover any need. Theoretically, you could have 4,294,967,296 unique addresses (2^{32}). However, with the explosion of the Internet and the increase in home networks and business networks, the number of available IP addresses is simply not enough. Briefly describe the operation of the following design solutions to the above issue identifying any limitation(s) of each [10 marks]

(i) Network address Translation

(ii) IPV6

(b) Give five functions of a proxy server [5 marks]

Question 4

(a) Write UNIX commands that performs the following functions [5 marks]

(i) removes directory your_dir if it is empty
(ii) Make directory in the Current directory
(iii) Prints present working directory (e.g. /home/smith/try it)
(iv) list the contents of the working directory with details
(v) Changes the ownership of a file or directory

(b) List the functions performed by [4 marks]
(i) Security administrator
(ii) Network administrator

(c) **Web services** are a set of tools that can be used in a number of ways. The three most common styles of use are RPC, SOA and REST.Briefly describe these styles [6 marks]