TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
(BTIT 13M/BSIT 12J)

EIT 4209: NETWORK SYSTEM ADMINISTRATION

END OF SEMESTER EXAMINATION
SERIES: DECEMBER 2013
TIME: 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions.
Attempt 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) Briefly explain the FIVE layers of TCP/IP protocol suite **(10 marks)**

b) Differentiate the following terms:
   (i)   "Rights" and "Permissions"
   (ii) "Security group" and "Distribution group"
   (iii) "Geopolitical design" and "Business design" **(16 marks)**

c) Explain the following terms:

(i) Security principal
(ii) Security identifier **(4 marks)**

Question Two

a) Servers play many roles in the client/server networking environment. As a system administrator, you are expected to know the primary types of servers and what functions they perform in your network. Discuss any FIVE types of servers you are likely to find in large enterprise.

(10 marks)

b) (i) Distinguish between "client" and "server" **(4 marks)**

c) (ii) Explain how peer-to-peer relation differs from client-server relationship. **(4 marks)**

(iii) State any ONE advantage and ONE disadvantage of client server relationship **(2 marks)**

Question Three

a) When a computer network is configured, each computer must have a work group and domain name: In the context of this statement discuss:
   (i) The difference between "workgroup" and "domain" **(4 marks)**
   (ii) The term "Active directory" **(2 marks)**
   (iii) Any two types of user accounts **(4 marks)**

b) Explain FIVE benefits of windows server 2003/8/12 active directory **(10 marks)**

Question Four

a) Users of the network are having problems: "Why is the network slow?" "Why can't I access my e-mail"? "Why can't I get to the shared drive?" and so on. Thus systems administrator begins the tedious and sometimes painful journey of troubles shooting. In the context of this statement:
   (i) Explain the term "Network analysis" **(2 marks)**
   (ii) Discuss the components of the network analyzer **(10 marks)**

b) Describe any FOUR reasons why intruders use sniffers on the network. **(8 marks)**

Question Five

a) Describe the following methods of protecting against intruders:
   (i) Encryption
   (ii) Virtual private network (VPN) **(4 marks)**

b) In installation of a network operating system (Ms Window Server 2008), Explain the difference between "Disk partition and disk formatting" **(4 marks)**

c) The system administrator can choose various password options to protect access to a domain or computer. Describe any THREE such options. **(6 marks)**

d) To assign the correct members to groups, it is important to understand the characteristics of the group scope. Describe the following types of group scopes, stating at least one characteristic.
   (i) Global group **(6 marks)**
   (ii) Universal group
   (iii) Domain local