TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY

EIT 4209: NETWORK SYSTEM ADMINISTRATION

END OF SEMESTER EXAMINATION

SERIES: APRIL2016

TIME: 2HOURS

DATE: Pick DateSelect MonthPick Year

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.
Do not write on the question paper.

Question ONE
a) Technical University of Mombasa wishes to break its class C IP address 195.5.20.0 into as many subnets as possible provided that it can get at least 50 clients per subnet. Find ranges of IP addresses for each subnet and its new subnet mask.   (10 marks)
b) State and explain two most important differences between Active Directory and Window NT domains.
(4 marks)
c) Define the following terms   (12 marks)
    i) Workgroup
    ii)Domain
    iii) A local account
    iv) A domain account
    v) Administrator account
    vi) A guest account
d) Highlight any four reasons why network administrators use network analyzers.   (4 marks)

Question TWO
a) By citing an example in each case, differentiate between the following terms:
  i) Network address and Broadcast address   (4 marks)
  ii) Loop back address and auto – configuration range   (4 marks)

b) Active Directory uses a hierarchical database model, which groups items in a tree-like structure. Explain the meaning of the following important Active Directory terms. (6 marks)
   i) Object
   ii) Tree
   iii) Forest
c) User profiles automatically maintain desktop settings for Windows users. By default, user profiles are stored on each user's local computer. State and explain three items that are stored as part of the user profile. (6 marks)

Question THREE
a) The system administrator can choose various password options to protect access to a domain. Describe two such options. (4 marks)
b) Highlight four challenges of systems administration. (4 marks)
c) Briefly describe the procedure of joining a computer to a domain. (4 marks)
d) Explain any two types of a user profile. (4 marks)
e) Explain two Importance of a Client-Server Model (4 marks)

Question FOUR
a) Explain two methods that can be used to sniff on a switch. (8 marks)
b) Every user account has a number of important account properties that specify the characteristics of the account. State and explain the three most important account properties. (6 marks)
c) Explain three benefits of Window server 2008 Active directory. (6 marks)

Question FIVE
a) State and explain any four components of a network analyzer. (8 marks)
b) An institution is thinking of implementing a client/server model type of network category and not peer to peer model type of network category. Explain the difference of the two network categories. (4 marks)

c) Troubleshooting is a process of identifying common network problems. Highlight four causes of a network failure. (4 marks)
d) Hightlight any four code of ethics for a network systems administration. (4 marks)