THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

JANUARY – APRIL 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

REGULAR PROGRAMME

CMT 203: INTRODUCTION TO SYSTEM ADMINISTRATION

Date: APRIL 2015	Duration: 2 Hours
Instructions: Answer Question ONE and any other TWO Questions.	

Q1. a) Discuss any five key systems administrative responsibilities.

(4 marks)

b) Distinguish between the following giving an example in each.

(4 marks)

   i)   Command options and command arguments
   ii)   Absolute and relative paths
   iii) Command mode and insert mode of the vi editor
   iv)   The mv and rm commands.
   v)   Ext2 and ext3 filesystems.

c) Explain the role of the following directories
   i)   /bin
   ii)   /etc
   iii) /home
   iv)   /boot

(4 marks)

d) You need to create and mount a new partion in your linux box hard disk. Discuss how you can achieve this using fdisk and mount command.

(6 marks)

Q2. a) Explain the command statement below.

(4 marks)

   i)   Mount –t ext2 –oro, noexec/dev/sda6/data
   ii)   Ps l
   iii) Ps ax
   iv)   Pstree

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v)   Top

b)   List down the factors that can cause a system to fail to boot.
                                                                    (6 marks)

c)   Discuss any of linux configuration files that are crucial to user management.
                                                                    (4 marks)

Q3.   a)   Explain the output of the following command. **(1 marks each)**
         i)   History
         ii)   History 10
         iii)   History –C
         iv)   !65
         v)   !string

      b)   Explain the output of the following command.

                                                                    (2 marks)

         vi)   Chmod a-wx file1/home/john/*.january
         vii)   Chmod 644*.txt
         viii) tr a-z A-Z</home/jan??>dump
         ix)   grep marks lists/sort-n-k4
         x)   rm Backups /*.199 [2-5]/ expenses??

      c)   Examine the bash output below
           -rwsrwsrwt 1 James users 0 2013-03-16 12:50 dumps
         i)   Which command was used to give such an option.
                                                                    (1 marks)
         ii)   Explain the significance of the two S and t it the output.
                                                                    (4 marks)

Q4.   a)   Explain the meaning of the following vi commands **(1 mark each)**
         i.   q:
         ii.   q!
         iii.   Wq:
         iv.   W file
         v.   20:

      b)   Write the commands that will accomplish the following
         i)   Find all ordinary file owned by root which have zero length and send the list to zerosize.
                                                                    (3 marks)
         ii)   Delete file under /home with names ending 'bak' which have not been accessed for two weeks.
                                                                    (4 marks)

      c)   Discuss in point form the key file system management role for a systems administrator.
                                                                    (8 marks)

Q5. a)   Discuss the details the man pages provide for every command.
                                                                    (8 marks)
     b)   Discuss the administrative possibilities made possible by the useradd
          command.
                                                                    (6 marks)
     c)   Discuss any four mostly run levels in Linux.
                                                                    (4 marks)

END

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