



**COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE  
DEPARTMENT OF COMPUTER SCIENCE & INFORMATION SYSTEMS**

**COURSE TITLE:     SYSTEMS ADMINISTRATION**

**COURSE CODE: CSC410**

**FINAL EXAMINATION**

**SESSION: NOVEMBER/DECEMBER 2019**

**LECTURER:           MUKHALELA B.U**

**TIME:                   3 HOURS**

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**Instructions to Candidate**

1. Answer All questions in Section A on an allocated computer, log-in using the Ubuntu OS (Linux version)
2. Create a folder called SysAdminPrac + your Reg number on the desktop of the allocated computer and save all your Section A work there.
3. Answer any three (3) question in section B using the provided answer booklets.



## Section A

[40 marks]

### Question 1

[20 marks]

Log on to the Ubuntu-Linux environment installed on the allocated computer and use the terminal to do the following: **NB** for each command and its results, take a screen shot and save it in your folder as given on the instruction above, file name would be eg **1a** for question 1 part a, **1b** for question **1b**, etc

- a. Move to the home directory
- b. Create a folder called Documents and enter the folder
- c. Create a file called file.txt and put the line this is an exercise.
- d. Display the file.txt contents on the screen.
- e. Copy the file to file1.txt
- f. Rename file.txt to exercise.txt
- g. Move one level up from the current location
- h. Create a user call Tatenda and assign a password
- i. Make Tatenda the owner of the Documents folder
- j. Delete file1.txt
- k. Create a directory called Fiction within a directory called Books using one command
- l. Display the current date
- m. Display the ip address (20)

### Question 2

[20 marks]

- a. Check if the Google server is reachable. (2)
- b. Show all IP addresses of all the devices on the network. (2)
- c. Create a Group called SystemSupport (2)
- d. Create any 3 users: Makanaka, Mukundisi and Tatukudzwa to be added to this group called SystemSupport give all of them a similar password :12345678 (6)
- e. Change the password for Tatukudzwa to:!234\$uwe (2)
- f. Create a file called list and make it belong to Mukundisi. (2)
- g. Give the following permississions: read, write and execute (use digits) to file list to all users in the group SystemSupport (4)

## Section B

[60 marks]

### Question 3

[20 marks]

- a. Differentiate between Passive and Active users. (4)



- b. Identify and briefly explain any three common traits found in System Administrators. (9)
- c. You have just been hired as a System Administrator at a small university, identify what would be some of your duties. (7)

#### Question 4

[20 marks]

- a. Briefly describe the three pillars of exceptional system design. (9)
- b. Discuss each of the following SAGE/LOPSA code of ethics:
  - (i) Professionalism (3)
  - (ii) System Integrity (3)
  - (iii) Social responsibility (3)
  - (iv) Personal Integrity (3)
  - (v) Laws and Policies (4)

#### Question 5

[20 marks]

- a. List any 4 access elements which you want to configure as a system administrator. (4)
- b. Identify the kinds of rights a System Administrator can give to users. (4)
- c. Write briefly what a System Administrator will use the following commands for:
  - (i) **wtmp** (2)
  - (ii) **utmp** (2)
  - (iii) **who/w** (2)
  - (iv) **last** (2)
  - (v) **lastlog** (2)
  - (vi) **cron.allow** (2)

#### Question 6

[20 marks]

- a. Write brief notes on the steps you will need to do so as to prepare a disk to accept Ubuntu installation from a bootable flash/usb.

**Hint:** Include disk partitioning and BIOS configurations. (10)

- b. Write the commands which you will code on a Linux system to accomplish the following;
  - (i) To remove a mounted CD drive. (2)
  - (ii) To display the system information. (2)
  - (iii) To display the current process information of system. (2)
  - (iv) To restart the system. (2)
  - (v) To open the network manager text user interface. (2)