



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE
AND TECHNOLOGY**

UNIVERSITY EXAMINATION 2013

**FIRST YEAR FIRST SEMESTER EXAMINATION 2013 FOR
DIPLOMA IN LINUX ENGINEERING**

KISUMU LEARNING CENTRE

COURSE CODE: ICT 2112

COURSE TITLE: LINUX/UNIX SYSTEM ADMINISTRATION

DATE: 20/4/2013

TIME: 9.00-10.30AM

DURATION: 1.5 HOURS

INSTRUCTIONS

- 1. This paper contains FIVE questions.**
- 2. Answer question 1(compulsory) and ANY other TWO questions**
- 3. Write all your answers in the booklet provided**

SECTION A: ANSWER ALL QUESTIONS (20 MARKS)

QUESTION 1

1. There can be multiple root directories in Linux. True or False? (1 Mark)
2. Describe a benefit of the File system Hierarchy Standard (FHS). (1 Mark)
3. What command do you use to display your current directory? (1 Mark)
 - a. ln
 - b. cd
 - c. pwd
 - d. ls
4. What command do you use to change to a different directory? (1 Mark)
 - a. ln
 - b. cd
 - c. pwd
 - d. ls
5. What command is used to view the contents of your current directory? (1 Mark)
 - a. ln
 - b. cd
 - c. pwd
 - d. ls
6. After entering **ls -a** , how can you tell which files are hidden? (1 Mark)
 - a. Their names are displayed in a different color.
 - b. Their names start with **a.(dot)**.
 - c. Their names start with an uppercase letter.
 - d. Their names end with a **.(dot)**.
7. Which of the following is displayed after issuing the **ls -l** command?(Choose all that apply.) (1 Mark)
 - a. File permissions

b. Parent directory

c. File type

d. Contents of subdirectories

8. What command creates an empty file? (1 Mark)

a. rm

b. mkdir

c. touch

d. rmdir

9. What command deletes files and directories? (1 Mark)

a. rm

b. mkdir

c. touch

d. rmdir

10. What command deletes empty directories? (1 Mark)

a. rm

b. mkdir

c. touch

d. rmdir

11. What command creates directories? (1 Mark)

a. rm

b. mkdir

c. touch

d. rmdir

12. The _____ command creates a new user. (1 Mark)

a. userdel

b. useradd

c. groupadd

d. createnewuser

13. What command is used to rename or move a file? (1 Mark)

a. rn

b. cp

c. mv

d. Both b and c

14. What command is used to copy a file? (1 Mark)

a. rn

b. cp

c. mv

d. Both b and c

15. What Linux command can you use to switch users without actually logging off your system? (1 Mark)

16. What is the use of the **SU** command in Linux (1 mark)

17. Using the *terminal*, Nigel, a Linux CentOS user wishes to delete a directory named "Movies" from his computers' Desktop. The directory contains 2 video files named "Django" and "Ted". From the Desktop directory he keys in the following command;

```
[nigel@localhostDesktop]# rmdir Movies
```

Is he able to delete the directory? (1 mark)

Explain why he **can or cannot** delete the directory. (2 marks)

18. Identify one way of opening theLinux terminal on a computer using CentOS operating system? (1 Mark)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION 2

1.
 - i) List three functions that logging in accomplishes in Linux. (3marks)
 - ii) As a multiuser OS, Linux requires logging in even if you are the only person using the computer. True or False? (1 mark)
 - iii) What is the difference between a regular user and a root user? (2 marks)
 - iv) What are the **vi**, **gedit** and **emacs** tools used for in Linux? (1 Mark)

2.
 - a) The Linux kernel can function in one or more modes, Identify these two modes (2 marks)
 - b) Which kernel type is compiled as a single block of code? (1 mark)
 - c) Which kernel type helps save memory and increase portability? (1 mark)
 - d) In Linux, what does the **u-name -r** command display? (1 mark)

3.
 - A) Editing the .config file directly is not recommended, you should use configuration tools **make oldconfig** , **make menuconfig** and **make config** to edit this file. What are the functions of these tools? (6 marks),

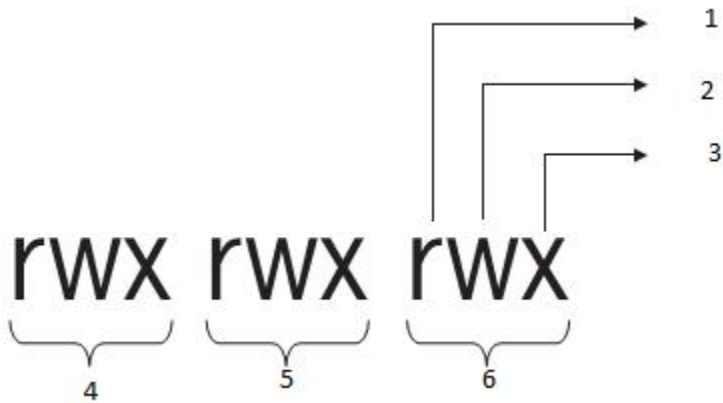
 - B) When working with on the kernel which commands would you use if you wanted to
 1. List Modules in the system (1 mark)
 2. Remove a specified module from the system (1 mark)

QUESTION 3

- A.
 - i. Briefly Explain What a Linux Distribution is. (2 marks)
- B.
 - ii. Give 6 Examples of Linux Distributions (3 marks)
- C. Using a Diagram describe the Linux directory structure (6 marks)
- D. The files clerk in your office frequently searches for a file named “payments” stored in the “scripts” directory. Using the “vi” or “vim” command, create a Linux shell script that will help him search for that file, starting in the home directory. The script should allow him to indicate where he wants to search and what file he wants to find. (6 marks)
- E. After creating and saving a script called scr1, Oliver, a Linux Engineering student entered the following commands respectively; **chmod 755 scr1** and **./scr1**
What does each command do? (2 Marks)

QUESTION 4:

- A. List three services that SAMBA provides (3 marks)
- B. The samba configuration file `/etc/samba/smb.conf` is divided into three sections. Name these sections (3 marks)
- C. Identify the Linux file permissions and categories indicated by numbers 1,2,3,4,5,6 in the below diagram (6 marks)



- D. Briefly Describe the X windows system (2 marks)
- E. While Linux offers all the tools you need to secure your computer, if you are careless, someone can harm your computer or try to gain access to your data. Briefly describe some Linux Security Checklist measures that you would use to protect your Linux desktop or server. (6 marks)