



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2019 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER AND LIBRARY SCIENCE

REGULAR PROGRAMME

DIT 011: LINUX ESSENTIALS

Date: APRIL 2019

Duration: 2 Hours

**INSTRUCTIONS: Answer Question ONE and any other TWO Questions.
Calculators MAY BE USED**

- Q1. a) Name two individuals who have greatly contributed to the development of Open Source Software and briefly explain their contribution. **(4 marks)**
- b) Compare and contrast between Microsoft office and LibreOffice. **(7 marks)**
- c) Compare and contrast between Microsoft Windows and Linux. **(5 marks)**
- d) Explain with an example the role of the Linux man command **(3 marks)**
- e) List any 4 applications area of Linux OS. **(4 marks)**
- f) Discuss in details how Linux kernel versions are managed. **(4 marks)**
- g) Name any three Linux shells that you can use. **(3 marks)**
- Q2. 1. Give any four options of the wc command **(4 marks)**
2. Discuss three ways one can create a text file in Linux. **(6 marks)**
3. Discuss the use of the following sort command. **(10marks)**

- a. sort myfile:
- b. sort -n myfile :
- c. sort -n -k4 myfile
- d. sort -r -n -k4 myfile *myfile*.
- e. sort -r -n -k4 myfile | tail -1

Q3. a) Explain the role of the following directories. **(10marks)**

- i. /root
- ii. /dev
- iii. /home
- iv. /etc
- v. /boot

b) Discuss the steps required to install a networked Linux workstation system

(10marks)

Q4. a) Write a script that will return the sum of any 7 values entered at the command prompt. **(7 marks)**

b) Distinguish with examples between relative and absolute path references. **(3 marks)**

c) Explain with examples any three (3) options used with the following comments.

- i) Ls command **(3 marks)**
- ii) find command **(3 marks)**
- iii) Grep command **(4 marks)**

Q5. a) Write the vi editor commands that will : **(7marks)**

- i. Save the current file and quit the editor:
- ii. Switch between the insert mode and the command mode:
- iii. Delete the next five character from the cursor:
- iv. Delete the next 7 words:
- v. Delete the characters to the end of the line
- vi. Delete the next three lines

1. Save the current file to a new text named **myfile**

b) Explain the role of the following positional parameters. **(7marks)**

1. \$IFS
2. \$PS1
3. \$PS2
4. \$\$
5. \$#
6. \$0- \$9
7. \$*

c) Explain what the script below does **(6marks)**

```
#!/bin/bash
if grep -q $1 /etc/passwd
then
echo The user $1 has an account
else
echo The user $1 does not have an account
fi
```

Q6. a) Discuss factors that has lead to the first development of Linux **(6marks)**

b) Explain the role of the five useful init levels. **(5marks)**

c) Write a script that prompts you for the name of a directory, captures the name and use to create a directory, then moves to that directory and do a long listing of the directory **(9 marks)**

END