JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DIPLOMA IN LINUX ENGINEERING FOR IT PROFESSIONALS
1ST YEAR 1ST SEMESTER 2022/2023 ACADEMIC YEAR

KISUMU CAMPUS

COURSE CODE: ICT 2112

COURSE TITLE: LINUX/UNIX SYSTEMS ADMINISTRATION

EXAM VENUE: **STREAM: Dip. Linux Engineering for IT Professionals**

DATE: **EXAM SESSION:**

TIME: 1 ½ HOURS

INSTRUCTIONS:

1. **Answer question 1 (COMPULSORY) and ANY other 2 questions.**
2. **Candidates are advised NOT TO WRITE ON THE QUESTION PAPER.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE [30MARKS]

a) State what you understand by terminal and shell in Linux **(2marks)**

b) State the functions of the following basic shell commands **(2marks)**

i. clear
ii. reset
iii. finger
iv. whoami

c) Distinguish between warm boot and cold boot **(2marks)**

d) What does the # and $ command line prompts mean **(2marks)**

e) Two different types of programs are executed on a computer state and explain **(4marks)**

f) State the four Categories of Operating Systems **(4marks)**

g) Linux Operating system is considered a Multiuser and multitasking OS explain what you understand by this statement. **(2marks)**

h) What is a Linux kernel? (**2marks)**

i) What do you understand by the term Open Source Software (OSS)? **(2marks)**

j) There are two competing GUI environments in Linux, state them **(2marks)**

k) Distinguish the following Types of Open Source Licenses **(2marks**)

l) State what you understand by the following terms in Linux **(2marks)**

m) Linux May be customized to provide services for a variety of companies in a variety of situations which include Workstation services and Server services. State four of the Internet Servers services that can be provided by Linux. **(2marks)**

QUESTION TWO [20 MARKS]

a) Briefly explain at least four implications of Open Source Software (OSS). **(8marks)**

b) Explain what you understand by the following Operating systems functions **(8marks)**

i. Job Management.
ii. Task Management.
iii. Memory Management.
iv. File Management.

c) State and explain the two fundamental components that form a computer **(4marks)**

a. Applications.
b. Operating system (OS) software.

QUESTION THREE [20 MARKS]

a) Briefly Explain What a Linux Distribution is. **(1 marks)**

b) Give 6 Examples of Linux Distributions **(3 marks)**

c) Using a Diagram describe the Linux directory structure **(6 marks)**

d) Explain what you understand by the following operating systems components **(4marks)**

1. Device Driver
2. User Interface
3. Graphical user interface (GUI
4. System services Gaining network access

e) Distinguish between developmental kernel and production kernel **(2marks)**

f) What is the difference between a regular user and a root user? **(2marks)**

g) State two good practices when preparing for Installation of Linux operating System?

(2marks)

QUESTION FOUR [20 MARKS]

a) Distinguish between open source and closed source, freeware and shareware **(4marks)**

b) Explain at least seven advantages associated with Linux as an operating system. **(14marks)**

c) Linux system must have at least a minimum of two partitions what function do they serve **(2marks)**

QUESTION FIVE [20 MARKS]

a) Describe the following directories in linux **(8marks)**

i. /
ii. /boot
iii. /home
iv. /usr
v. /usr/local
vi. /opt
vii. /var
viii. /temp

b) Describe how a computer boots up (**7marks)**

c) What do you understand by the term swap memory? **(1mark)**

d) Explain what you understand by the following Common Linux file management commands **(4marks)**

i. mkdir
ii. rmdir
iii. mv
iv. cp