



ICT2631

May/June 2016

OPERATING SYSTEMS PRACTICE

Duration 2 Hours

100 Marks

EXAMINERS

FIRST

EXTERNAL

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PROF HS VENTER

Use of a non-programmable pocket calculator is permissible

Closed book examination

This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.

Please answer all questions in sequence

This paper consists of 4 pages including this one

TURN OVER

Question 1

- 1 1 Managing processes is one of the features that make up Linux and similar computer operating systems. Why is that so? (3)
- 1 2 Many websites are built on the LAMP stack of free and open-source software where Linux is the operating system which they are built on. What do the L, A, M, and P stand for? (4)
- 1 3 Substitution allows you to have a command interpreted by the shell rather than the command itself. Consequently the standard output of a command becomes the argument for the next command. Look at the command below and describe step by step how substitution works.
\$ vi \$(find /home | grep fire) (9)
- 1 4 Explain what a shell script is. (2)
- 1 5 Name three virtualization technologies that may be used to run multiple operating systems on the same machine. (3)
- 1 6 Assume you have typed an *useradd* command. What six actions will be performed to create the new account? (6)
- 1 7 Given the following line from a listing of files, write everything you can tell about the Music entry down? (8)
drwxr-xr-x 2 joe joe 4096 Jul31 13 06 Music
- [35]

Question 2

- 2 1 Write down the keyboard shortcuts you can use with the window manager when you want to do the following. (4)
- a) Run dialog
 - b) Lock Screen
 - c) Show Main Menu
 - d) Print Screen

TURN OVER

- 2 2 Name the two directories that contain most of the administrative commands (2)
- 2 3 When using command line recall, which command will you use to run a command containing a certain string? (2)
- 2 4 Which shell variable holds the user ID number for the current user? (2)
- 2 5 A file called *data.txt* has all permissions open (rwxrwxrwx). Write down the permission that will apply after the commands (a,b and c) are given
- a) `chmod a-w data.txt` (2)
 - b) `chmod o-x data.txt` (2)
 - c) `chmod go-rwx data.txt` (2)
- 2 6 Briefly explain what an Alias is (3)
- 2 7 What is the difference between the "*" and "?" file-matching metacharacters? (2)
- 2 8 What is the advantage of vi or emacs over a graphical editor? (3)
- 2 9 You can use the ZZ command to save the current changes to a file in vi and then quit the editor. Which other command does the same thing? (2)
- 2 10 What does the pipe character (|) do when running processes in Linux? (2)
- 2 11 Which command is a character-based translator that can be used to replace one character or set of characters with another? (2)
- 2 12 What does the su command do? (2)
- 2 13 What does the sudo command do? (2)

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Question 3

- 3 1 Describe what the following sequence of commands do? (4)
#mkdir /mnt/mycdimage
#mount -o loop whatever-1686-disc iso /mnt/mycdimage
- 3 2 What does the free command do in terms of swap areas? (2)
- 3 3 What is the advantage and disadvantage of using the locate command? (4)
- 3 4 What is the purpose of each of the following commands? (4)
a) cd
b) pwd
c) mkdir
d) ls
- 3 5 Write a command to display the permissions of the directory called "test" (without the quotes) (3)
- 3 6 What information will appear in your prompt if you use the `|u` and `|t` special characters? (4)
- 3 7 Name and describe the four different partition types. (8)
- 3 8 What is a firmware RAID device? (2)

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TOTAL [100]