ICT2631

October/November 2016

OPERATING SYSTEMS PRACTICE,

Duration   2 Hours

100 Marks

EXAMINERS ·
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EXTERNAL   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

Question 1

1 1   Explain the implications of a proprietary Operating System   (4)

1 2   Options for commands may be specified using "-" or "- - " Explain when the "-" and "- -" is used
        and give examples to illustrate the difference   (4)

1 3   Give the two general forms that may be used to expand an arithmetic expression and pass it to the
        shell   (4)

1 4   The Bash shell uses, among others, a */etc/bashrc* configuration file When is this file executed and
        what is set during the execution?   (4)

1 5   Metacharacters may be used to re-direct data to and from files List the metacharacters that may
        be used for this re-direction and briefly explain the purpose of each   (10)

1 6   What solution is available in Linux to prevent you from having to enter groups of commands every
        time you need them? Explain the concept briefly   (3)

1 7   Assume you had to advise someone how to choose a password What would you tell them? (6)

                                                                                            [35]

Question 2

2 1   How does RPM differ from YUM in terms of managing dependencies upon installation?   (3)

2 2   Starting with permissions - - - - - - - - -, write two different commands based on letters to assign
        the permissions rw-r--r-x   (6)

2 3   Explain what the following commands do when you are in "ex" mode in the vi editor   (4)
        a) g
        b) s

2 4   Give the *find* command that will find any file named *statement* under the */doc* directory and
        include the name in the output of an *echo* command that displays "File is in" followed by the path
                                                                                            (6)

2 5   Explain the purpose of the following positional shell variables   (4)
        a) $@
        b) $#
        c) $?
        d) $1

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2 6   What is the purpose of the pipe character (|) when used in a command?   (2)

2 7   Explain the difference between *su* and *sudo*   (4)

2 8   What information would you gather in preparation for configuring a Linux system for LDAP
       authentication?   (4)

                                                                                              [33]

Question 3
3 1   What command would you use to achieve the following in terms of software management?
       a) Download Firefox from the yum repository without installing it.   (2)
       b) Remove the package *emacs* using RPM   (2)
       c) Determine what dependencies *emacs* has using yum   (2)

3 2   Briefly state the purpose of the following *useradd* options
       a) -c   (2)
       b) -d   (2)
       c) -D   (4)
       d) -m   (4)
       e) -M   (2)
       f) -s   (2)

3 3   What is an Access Control List (ACL)?   (2)

3 4   Give the command you would use to mount a disk *sdb2* using an *ext3* file system The
       mount point *mnt/olddisk* already exists and it must be mounted as read only   (8)

                                                                                              [32]

                                                                              TOTAL [100]