

# **DAMIBIA UNIVERSITY** OF SCIENCE AND TECHNOLOGY FACULTY OF COMPUTING AND INFORMATICS

### DEPARTMENT OF COMPUTER SCIENCES

QUALIFICATION: BACHELOR OF COMP	UTER SCIENCE
QUALIFICATION CODE: 07BCMS	LEVEL: 7
COURSE CODE: LSA721S	<b>COURSE NAME:</b> Linux Systems Administration
SESSION: NOVEMBER 2023	PAPER: (PAPER 1)
DURATION: 3 HOURS	<b>MARKS:</b> 85

UNITY EXAMINATION QUESTION PAPER
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INSTRUCTIONS
 I. Answer ALL the questions.
<ol><li>Read all the questions carefully before answering.</li></ol>
3. Number the answers clearly

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

Section A: (Multiple choice)

(20 Marks)

Read each question carefully, and then select THE ANSWER that best fits the question

	31	
1.	Which is an example of commercial distros?	
	a) Centos	b) SUSE Linux Enterprise
	c) Fedora	d) ubuntu
2.	Which command is used to display the unix version?	
	a) unamer	b) uname -n
	c) uname –t	d) kernel
3.	Host specific configuration files are installed in?	
	a) /etc directory	b) /lib directory
	c) /root directory	d) /bin directory
4.	Which command is used to display the operating system n	ame?
	a) os	b) unix
	c) kernel	d) uname
5.	Which option of ls command is used to view file inode num	nber?
	a) –l	b) -o
	c) –a	d) —i
6.	How do you get help about the command "cp"?	
	a) help cp	b) man cp
	c) cd ?	d) none of the mentioned
7.	Which command changes a file's group owner?	
	a) cgrp	b) chgrp
	c) change	d) group
8.	Which command is used to extract a column from a text fi	le?
	a) paste	b) get
	c) cut	d) tar
9.	Which one of the directories do not contain binary files?	
	a) /bin	b) /sbin
	c) /etc	d) none of the mentioned
10	. The permission -rwxr–r– represented in octal expression v	vill be?
	a) 777	b) 666
	c) 744	d) 711
11	. How do you remove duplicate lines from the file foo using	uniq?
	a) sort foo   uniq –u	b) sort -u foo   uniq -d
	c) sort foo   uniq –c	d) sort foo   uniq –l
12	. Which command is used to display disk consumption of a	specific directory?
	a) du	b) ds
	c) dd	d) dds
13	. The directory /opt is reserved for?	
	a) installation of add-on application software packages	b) optional booting files
	c) optional user specific files	d) none of the mentioned

14. Which command reads the user input from the terminal and assign this value to a variable name?

	a) read	b) get
	c) declar	d) set
15.	Indicate the right option to search for BOB, Bob, BOb or Bo	B?
	a) grep —i Bob files	b) grep 'B[oO][bB]' files
	c) grep '[BOB]' files	d) grep -v 'Bob' files
16.	Which command is used to check filesystem usage in a sys	tem?
	a) mount	b) df
	c) du	d) dd
17.	Which file contains the filesystems to be automatically mo	unted during boot?
	a) /etc/mount	b) /etc/fstab
	c) /etc/inittab	d) /etc/boot
18.	Which is an example for CD-ROM?	
	a) Virtual Terminal	b) block special file
	c) Terminal	d) Serial modem
	e) hard disk	

19. What is /media directory used for?

a) mount point for removable media	b) mount point for filesystem
c) mount point for removable media & filesystem	Characteristics and the second states with the second states.
20. Which one of the following statements is true about	1.2

a) variables do not require declaration before assigning value to them

b) variables are case sensitive

c) to extract the contents of a variable, we have to provide the variable a preceding \$d) all of the mentioned

# Section B: True or False

#### [10 Marks]

# Read each statement below carefully and state whether they are false or true.

- 1. The commercial distros also tend to have a longer release life cycle.
- 2. RED Hat is one of the original Linux distributions.
- 3. We can use the > symbol along with pipe in a command.
- 4. Method of storing and organizing computer files and their data is referred to as file system.
- 5. A famous professor Linus Torvalds developed Minix, a simplified version of UNIX that runs on PC.
- 6. The wc command is used to find out the number of users logged on.
- 7. HCL stands for High Computing Load.
- 8. Linux distributions can be broadly categorized into three groups.
- 9. Only one unprivileged user may be logged into a Linux system at any given time.
- 10. There are three types of variables in Linux.

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#### Section C

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# Answer all the questions in this section

1. Write down the commands to perform the following:	
<ul> <li>i. To display the contents of the crontab file of the currently logged in user.</li> <li>ii. Display all system variables.</li> <li>iii. Counting the number of lines for the abc.txt file.</li> <li>iv. Remove Dir2 directory and its subdirectories.</li> <li>v. To edit the current user's cron jobs.</li> <li>vi. To change the password of a user named "paulina</li> </ul>	[1] [1] [1] [1] [1] [1]
2. Explain what the following commands are doing:	
<ul> <li>i. export student=john</li> <li>ii. dd if=/dev/hdc3 of=/home/bob/filesystem.img</li> <li>iii. chown labs.users sales.txt</li> <li>iv. rpm-qa</li> <li>v. sleep 300 &amp;</li> <li>vi. head /etc/passwd</li> </ul>	[2] [2] [2] [2] [2] [2]
<ul> <li>3. What is the uid and gid of a root user on a Linux server?</li> <li>4. What do you understand by the term Multi-User in Linux?</li> <li>5. What is the difference between root directory (/) and /root directory?</li> <li>6. What does BASH stand for?</li> </ul>	[2] [2] [2] [1]
7. Which pages contains the best source of information for most commands?	
<ol> <li>8. Name two things that you must be able to do for software to qualify as free software according to FSF standards.</li> <li>9. Name two most popular ways to interact with a Linux computer?</li> <li>10. What are the three significant characteristics demonstrated by server-grade system</li> </ol>	[4] [2]
<ul> <li>11. Name three advantages of using Bash scripts.</li> <li>12. Write a shell script that will print a multiplication table of 10, from 1 to 10.</li> <li>Sample output 3 x 1 = 10</li> </ul>	[3] [3] [6]
 3 x 10 =30	
13. Name two ways to execute a Bash script called shell1.sh. 14. What is the difference between an environment variable and a user-defined variab	[2] ble? [2]
15. With the default umask of 0124, what would be the default permissions for newly files and directories?	created [6]

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