



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2018

Program: B.Tech CS with OSSOS

Subject (Course): Administering Open Source Systems

Course Code : CSIB-222

No. of page/s: 2

Semester – IV

Max. Marks : 100

Duration : 3 Hrs

Section A

[20 Marks]

Instruction: Attempt all questions.

1. In a file word LINUX is appearing many times? How will you count number? [4] CO1
2. What is Zombie process in linux? How do you find Zombie process in linux? [4] CO2
3. What is "chmod" command? What do you understand by this line "r- -w- - -x"? [4] CO2
4. How do you know if a remote host is alive or not in linux? [4] CO5
5. What do you mean by single rooted file hierarchy in linux? [4] CO3

Section B

[40 Marks]

Instruction: Attempt all questions.

6. Explain booting the system with GRUB? What are different run levels explain any five?[10] CO1
7. What is Linux kernel? Discuss kernel architecture with neat diagram? [10] CO2
8. What is redirection? Explain error redirection with suitable example? "Redirecting output can destroy the file" comment on this statement? [10] CO3
9. What is the need for backup? What are different types of Backup? Explain restore and tar command with suitable example? [10] CO4

OR

How do you create links?

[10] CO4

Section C

[40 Marks]

Instruction: Attempt all questions.

10. Why security should be the main considerations to setup the Linux Server environment? What are the general steps to recover a compromised Linux server? What are different tools and techniques to ensure server security?

[20] CO6

OR

Explain in detail the general steps to configure Samba Server?

[20]CO6

11. When it puts files in a **lost+found** directory, fsck has lost the directory information for the files and thus has lost the names of the files. Each file is given a new name, which is the same as the inode number for the file:

\$ ls -l lost+found

`-rw-r--r-- 1 alex pubs 110 Jun 10 10:55 51262`

How can you identify these files and restore them?

[20] CO4

Roll No: -----



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Section A

[20 Marks]

Instruction: Attempt all questions.

1. Write command to list all the links from a directory? [4] CO2
2. What is the difference between Swapping and Paging? [4] CO3
3. Consider these two commands:
\$ echo cat
\$ cat echo
Explain the differences between them. [4] CO1
4. What is the difference between soft link and hard link? [4] CO2
5. Which commands can you use to determine who is logged in on a specific terminal? [4] CO3

Section B

[40 Marks]

Instruction: Attempt all questions.

6. What are special permission in linux? Write a shell script for Triangle classification problem?[10]CO4
7. What happens when you give the following commands if the file named **done** already exists?[10]CO2
\$ cp to_do done
\$ mv to_do done
8. What is the need for backup? What are different types of Backup? Explain restore and tar command with suitable example? [10] CO5

9. What is a file system? Explain linux native file system in contrast to foreign file system? [10]CO3

OR

What are different command line options? Explain any five? [10] CO3

Section C

[40 Marks]

Instruction: Attempt all questions.

10. Explain in detail the general steps to configure Samba Server? [20]CO6

OR

What are different networking commands in Linux? Explain in detail with working example? [20] CO6

11. (a) The `ls -i` command displays a filename preceded by the inode number of the file. Write a command to output inode/filename pairs for the files in the working directory, sorted by inode number. [10] CO4

(b) Explain the error messages displayed in the following sequence of commands: [10] CO4

```
$ ls -l
total 1
drwxrwxr-x 2 alex pubs 1024 Mar 2 17:57 dirtmp
$ ls dirtmp
$ rmdir dirtmp
rmdir: dirtmp: Directory not empty
$ rm dirtmp/*
rm: No match.
```