

# MU-143

March-2019

S.Y. Integrated M.Sc. (CA & IT), Sem.-IV

## Open Source Techniques

Time : 2:30 Hours]

[Max. Marks : 70

1. Answer the following :

- (1) Explain the UNIX architecture with diagram. 5

**OR**

Explain the UNIX file system tree with diagram.

- (2) Name the command used for creating, deleting and changing the directories. Explain with the syntax and example. 5
- (3) Define pathname. Explain absolute and relative pathnames with example. 4

2. Answer the following :

- (1) Explain in brief the seven field output of ls-l command. 5
- (2) Discuss sort command with help of an example. Also explain the significance of options -n,-r,-u,-t,-k. 5
- (3) Explain alias command. Create an alias named rm that always deletes file recursively. How can you execute the original rm command without unaliasing it ? 4

**OR**

List and explain the three modes of vi editor with diagram. How can you switch from one mode to another ?

3. Answer the following :

- (1) Discuss the Shell's interpretive cycle. 5
- (2) Explain the mechanism of process creation along with a diagram. 5
- (3) Explain the following commands with syntax and example. 4
- (a) cut
- (b) uniq with options -u,-d,-c

**OR**

The current file permissions for file programs are r w - - w - r - -.

Write chmod expression required to change them into the following using both absolute and relative methods of assigning permission.

- (a) rwx rwx - - x
- (b) r - - r - - - - x

4. Answer the following :
- (1) Explain grep command with its syntax. Also explain its options with significance and example. 5
  - (2) Explain built-in functions of awk with example. 5
- OR**
- Explain in brief hard link and soft link with example.
- (3) Write a shell script that accepts a file name, starting and ending line numbers as arguments and displays all the lines between the given line number. 4
5. Answer the following :
- (1) Explain Cathedral and Bazaar methodology used in development of Open Source Software (OSS). 5
  - (2) Define copyleft. Explain freeware and free software along with examples. 5
- OR**
- Explain in brief GNU General Public License (GPL).
- (3) Explain the following commands with example : 4
    - (a) date
    - (b) cal
    - (c) who
    - (d) cmp
- OR**
- Explain in brief yum and Red Hat Package Manager (RPM).
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