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44 (5) SAUL 5.1/G

**2021**

**( Held in 2022 )**

**SYSTEM ADMINISTRATION  
USING LINUX**

Paper : 5.1

Full Marks : 80

Time : Three hours

***The figures in the margin indicate  
full marks for the questions.***

1. Answer the following questions : **(any five)**  
1×5=5
- (a) Who is 'system administrator'?
  - (b) Name the *three* basic types of files available in Linux.
  - (c) What are the different kinds of permissions available in Linux?
  - (d) Write the basic command for stopping a running process.
  - (e) What do you mean by 'root account'?
  - (f) What is port number?

*Contd.*

2. Answer the following questions : **(any five)**  
2×5=10

- (a) Name *four* Linux distribution available in the market.
- (b) What is 'i-node'? Define briefly.
- (c) What is Linux shell? What is shell script?
- (d) How can you create a background process in Linux? Give an example.
- (e) What are the significance of 'su' and 'sudo' commands?
- (f) Name the type of classes in which the following IP addresses belong:
  - (i) 10.10.169.26
  - (ii) 193.129.203.7

3. Answer the following questions :

- (a) Write the general syntax and functions (descriptions) of *any three* file and directory handling commands used in Linux. 3×2=6

**Or**

Write the general syntax and functions (descriptions) of the following network related Linux commands :

- (i) ifconfig
- (ii) netstat
- (iii) telnet

(b) Write down a few advantages of using Linux as an O.S. 2

4. Answer the following questions : **(any three)**  
4×3=12

(a) Write briefly about 'Linux kernel' and 'Device drivers'. 2+2=4

(b) What do you mean by absolute and relative pathnames? Define with an example of each. 2+2=4

(c) What do you mean by filter commands? Name *any four* filter commands used in Linux. 2+2=4

(d) Write the command for examining the list of running processes on the Linux system. Also write the types of data (process attributes) presented by the output of that command.

5. Answer the following questions : **(any five)**  
5×5=25

(a) Describe various system administration tasks.

(b) What do you mean by 'file ownership' and 'access permission'? Discuss with examples.

(c) What is cron? Briefly explain the format of the crontab file.

- (d) Discuss the 'mounting' and 'unmounting' of file system in Linux.
- (e) How could you add, modify and remove the user account in Linux through command line (Terminal)? Give an example of each to do so.
- (f) What are the rules of governs the IP address classes? Mention the different classes of IP addresses with their ranges.

6. Answer the following long questions :

**(any two)**

10×2=20

- (a) What are the 'standard directories' available in Linux file system? Describe briefly the contents that these directories generally keep.
- (b) Describe the backup and restore procedure used in Linux with suitable commands and examples.
- (c) Describe the significance of the /etc/service file and well known port numbers.
- (d) What is DHCP server? Write the basic steps to configure/setting up a DHCP server in Linux.