

2019

COMPUTER SCIENCE

(Major)

Paper : 6.3

(System Administration using Linux)

Full Marks : 60

Time : 3 hours

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

1. Answer the following questions : 1×7=7
- (a) What do you mean by file ownership in Linux?
 - (b) Mention any command to view the process-id of a process.
 - (c) Which symbol is used to indicate directories in Linux?
 - (d) State the use of 'netstat' command.
 - (e) Which Linux command is used to see the IP address in Linux?
 - (f) State the use of 'iptables'.
 - (g) Name any two commonly used Linux shells.

2. Answer any *four* of the following questions :

2×4=8

- (a) What is the use of squid proxy?
- (b) Differentiate between hardlink and softlink.
- (c) State the purpose of using /etc/fstab file.
- (d) State the use of 'ls-l' command in Linux.
- (e) Why do we use 'Nice value' in a process?

3. Answer any *three* of the following questions :

5×3=15

- (a) (i) What do you mean by Network mass and Network address? 2
- (ii) For a given IP address, 208.62.20.8 and subnet mask 255.255.255.0, identify the network address. 3
- (b) (i) Describe two types of paths used in Linux system with example. 2½
- (ii) How can we create background process in Linux? Give example. 2½
- (c) State the duties of a System Administrator. 5

- (d) Write a shell script program to input an integer and check whether it is prime number or not. 5

- (e) Write down the appropriate commands which can be used from a terminal window in Linux for the following operations (any *five*) : 1×5=5

- (i) To go to root directory
- (ii) To remove user named 'abc'
- (iii) To provide only read and execute permissions to all user types for the file 'lmn.C'
- (iv) To show available printer devices and drivers on the system
- (v) To add a user named 'pqr' to a group named 'Group 1'
- (vi) To set the system date as today's date

4. Answer any *three* of the following questions :

10×3=30

- (a) Discuss the architecture of Linux file systems. 10
- (b) (i) Describe the procedures of installing Linux. 5
- (ii) Explain briefly the back up and restore procedure used in Linux. 5

(c) Write down the steps to configure DNS server. Explain the use of crontab file in Linux. 7+3=10

(d) (i) Explain the concepts of using pipes and filters in Linux. Name any two filters commonly used. 5

(ii) Explain the necessity of system monitoring and logging. 5

(e) Write short notes on any *two* of the following : 5×2=10

(i) NFS (Network File System)

(ii) NIS (Network Information System)

(iii) Configuration of DHCP server

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