

(2 ½ Hours)

[Total Marks: 75]

N.B. 1) All questions are compulsory.

2) Figures to the right indicate marks.

3) Illustrations, in-depth answers and diagrams will be appreciated.

4) Mixing of sub-questions is not allowed.

Q. 1 Attempt All (Each of 5Marks)  
(15M)

(a) Multiple Choice Questions:

1. Any minor changes or updates within each major release version will be reflected by increments to the third digit which is also called as

- a) final point release
- b) stable storage release
- c) stable version release
- d) stable point release

2. LVM command gives the attributes of a logical volume, such as read/ write status, size, and snapshot information.

- a) Lvview
- b) Lvshow
- c) lvstatus
- d) lvdisplay

3. is an automatic updater and package installer/remover for RPM system.

a) apt-get

b) dpkg

c) yum

d) dpms

4. Run level 6 indicate -

a) Reboot the system

b) Full multi user mode

c) Single user mode

d) Halt the system

5. \_\_\_\_\_ file contains a list of all partitions known to the system.

a) /sys

b) /proc

c) /etc/fstab

d) /etc/dev

(b) Fill in the blanks :(Greate Unified Booter, netstat,IP addresses , Port 21, netstatus, DNS, ARP addresses, ufw, Grand Unified Bootloader, ufw, DHCP, Port 80)

1. GRUB stands for

2. \_\_\_\_\_ is a network protocol that enables a server to automatically assign an IP address to a computer from a defined range of numbers configured for a given network.

3. The default port for Http request is \_\_\_\_\_ .

4. Domain Name Service (DNS) is an Internet service that maps and fully qualified domain names (FQDN) to one another.

5. The program is used to display the status of all of the network connections on a host.

(c) Short Answers:

1. State True or False: Tellinit commands tells init when to switch from one process to another.

2. What is active FTP?

3. Write syntax of mount command?

4. What is an idea behind using POP?

5. Define RPM.

Q. 2 Attempt the following (Any THREE)(Each of 5Marks)  
(15M)

(a) What is GNU public license? Explain advantages and disadvantages of open source software.

(b) Write a short note on init daemon.

(c) Explain IPv4 with a neat header diagram.

(d) Explain any five user management commands in linux.

(e) Discuss the commands for building and compiling a kernel?

(f) What are chains? Explain the five predefined chains in Netfilter.

Q. 3 Attempt the following (Any THREE) (Each of 5Marks)  
(15M)

(a) List & explain common record types for DNS Server.

- (b) Write a short note on Kerberos.
- (c) How Primary Zone is configured in BIND configuration file?
- (d) Define SMTP. List and explain the key components that are essential for email to work.
- (e) Explain the following common directives or options used in Apache's configuration file.

- i) ServerRoot
- ii) Listen
- iii) ServerName
- iv) ServerAdmin
- v) DocumentRoot

(f) How user management helps to secure Linux server from security threats?

Q. 4 Attempt the following (Any THREE) (Each of 5Marks)  
(15)

- (a) Define MySQL. Explain in short InnoDB and MyISAM database engines.
- (b) Explain NFS. Also write the common uses of NFS.
- (c) Write a short note on FTP.
- (d) Explain the following servers required for running chat applications.
  - i) IRC server
  - ii) Jabbar Instant Messaging server.
- (e) Discuss any 5 common dhcpd.conf options.
- (f) What is role of DHCP server? How it is configured?

Q. 5 Attempt the following (Any THREE) (Each of 5Marks)  
(15)

(a) Explain the format of following files:

i) /etc/passwd

ii) /etc/group

(b) What is OpenSSH? List and explain any 3 OpenSSH programs.

(c) Discuss Dovecot server using following points:

i) Definition

ii) Installation

iii) Configuration

(d) Diagrammatically explain the steps involved with creating a logical volume

(e) Write any 5 DFS implementations.