(2½ hours)

[Total Marks: 75]

N. B.: (1) **All** questions are **compulsory**.
(2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(3) Answers to the **same question** must be **written together**.
(4) Numbers to the **right** indicate **marks**.
(5) Draw **neat labeled diagrams** wherever **necessary**.
(6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt _any two_ of the following:** **10**
a. Enumerate the features of Linux operating system.
b. Explain the duty of the Linux system administrator in creating and maintain user accounts.
c. Explain the grub.conf file.
d. Explain the IBM's journaling file system and SGI's extended file system.

2. **Attempt _any two_ of the following:** **10**
a. Explain any ten important files in /etc/sysconfig directory.
b. How is internal network configured? Explain.
c. Enumerate the new features in NFS 4.
d. How is Ethernet device added and removed using Network Configuration Tool?

3. **Attempt _any two_ of the following:** **10**
a. Explain the smb.conf file.
b. How can we connect to samba client? Explain.
c. What is timeserver? Why is it required? What are the different types of time servers? How is it configured?
d. Explain the squid configuration parameters.

4. **Attempt _any two_ of the following:** **10**
a. Discuss the following protocols available in Linux:
http, sshd, ftpd.
b. Explain the different standalone services in Linux.
c. Explain the seven configuration statements used in named.ca file.
d. Explain the different types of domain servers.

5. **Attempt _any two_ of the following:** **10**
a. What is mail queue? How is it managed?
b. How is Dovecot server configured and tested? Explain.
c. What is a macro? What is the m4 macro processor? Explain.
d. How can Email security be maintained? Explain.

6. **Attempt _any two_ of the following:**　　　　　　　　　　　　　　　　**10**
a. What are the changes in Apache 2.0 compared to Apache 1.x? Explain.
b. How can multiple accounts be modified simultaneously? Explain with example. Or What is userfile? How is it different from standard password file?
c. How can the output of rpmquery be formatted? Explain with example.
d. How can we check the software versions? Exaplin the common version-numbering elements.

7. **Attempt _any three_ of the following:**　　　　　　　　　　　　　　　　**15**
a. Explain the device file system and systemfs.
b. How is security enhancement setup in NFSv4?
c. How are NTP clients configured to use autokey encryption?
d. What are zone statements? Explain the different values for the zone statement.
e. How can anonymous ftp uploads be enabled in vsftpd? Explain.
f. Explain the <Files> </Files> and <IfModule> </IfModule> blocks.

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