(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. Write the purpose of following directories of /
  i. home   ii. boot   iii. bin   iv. root   v. etc
b. Write a short note on runlevel.
c. List duties of System Administrator. Explain any two.
d. Write the steps required to boot system.

2. **Attempt *any two* of the following:**   **10**
a. Write the importance of cron files.
b. Explain the concept of DHCP.
c. What is subnetting? Explain with suitable example.
d. Write the purpose of exports file.
  Consider the following sample /etc/exports file:
  /usr/local   *.example.com(rw)
  /usr/devtools   198.18.16.0/24(ro)
  /home   195.15.0.0/255.255.255.0(rw)
  /var/spool/mail   197.27.0.1(ro)
  Write the meaning of these lines.

3. **Attempt *any two* of the following:**   **10**
a. Write the steps to configure network time server.
b. Explain smbclient and smbmount commands of samba.
c. What is catching proxy server? Explain proxy server configuration in short.
d. Write the purpose of home section of samba configuration file.

4. **Attempt *any two* of the following:**   **10**
a. List and explain different types of domain name servers.
b. Explain the zone file with suitable example.
c. Explain scp and sftp secure services.
d. List various less secure services. Write the purpose of any four.

5. **Attempt *any two* of the following:**   **10**
a. Differentiate between IMAP4 and POP3.
b. Write the use of MUA and MTA components used in mail delivery process.
c. Write the purpose of ftpusers and user_list files of ftp.
d. List any five options of ftp configuration file. Also write the purpose of the same.

6. **Attempt _any two_ of the following:**   **10**
   a. What is the use of \<Directory\> block in configuring apache server?
   b. Explain the use of rpmquery command.
   c. Explain the useradd command with suitable example.
   d. What necessary changes are to be carried out in httpd.conf file to enable CGI?

7. **Attempt _any three_ of the following:**   **15**
   a. Write a short note on RAID.
   b. Explain the concept of NFS with suitable example.
   c. List NTP utility programs. Write purpose of any four.
   d. Explain the concept of domain with example.
   e. List various configuration files of ftp. Also write the purpose of each.
   f. What is the purpose of /etc/passwd file?