

(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 three of the following:** 15
 - a. Describe different duties of Linux System Administrator.
 - b. Write in brief about Linux Distributions.
 - c. Explain the concept of hardlink and symbolic link. Write a command to create hard link and symbolic link.
 - d. How do we manage processes with ps command.
 - e. Explain Bash shell in detail
 - f. Distinguish between yum and rpm.

2. **Attempt any three of the following:** 15
 - a. What is a partition what are types of partition write steps to create a partition
 - b. Write short note on Logical Volumes.
 - c. Describe NetworkManager Configuration Files.
 - d. Give a brief explanation on IPv6 setup.
 - e. What different User Management Commands used in Linux?
 - f. Explain in detail about /etc/passwd.

3. **Attempt any three of the following:** 15
 - a. What do you understand by IP Masquerading (NAT)?
 - b. What are firewalls? How it protects the server?
 - c. Write a brief note about SSL.
 - d. Summarize Certificate Authority in a brief note.
 - e. Explain NFS and setting up NFS.
 - f. State the differences between NFS and Samba

4. **Attempt any three of the following:** 15
 - a. What is DNS server? List and explain DNS server types.
 - b. Explain the DHCP server configuration.
 - c. What are the components of email delivery process.
 - d. Explain the httpd.conf file in detail
 - e. How to configure an Apache server to use LDAP?
 - f. Explain how the DirectoryIndex, Options, AllowOverride, and Orderdirectives in Apache.

5. Attempt any three of the following:
- What are different elements of a shell script?
 - Write a script to accept the number from user and print its multiplication table.
 - Explain different standard components (items) used in HA (High-Availability) cluster.
 - What is boot loader? Explain content of grub.conf file.
 - Explain setting up the network installation server.
 - How is the network server configured as an installation server? Enumerate the steps for the same.
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