

(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:**

- Explain piping and Redirecting with proper example. Write a command to print first three lines of the file.
- What are the different duties of Linux System Administrator?
- Explain find command with following options: -name, -user, -exec, -type
- What are different commands for Process Management?
- Explain the concept of hardlink and symbolic link. Write a command to create hard link and symbolic link.
- Write a note on RPM and YUM in Linux.

**2. Attempt any three of the following:**

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- What are different kinds of partitions available in Linux?
- What are different File Systems available on RHEL?
- Write a short note on runlevels and services in Linux.
- What are different steps to enable SSH server on RHEL?
- Explain the function of passwd command with its options.
- What are the commands used for managing group membership? Write a command for creating two groups and change current group assignment to other existing user.

**3. Attempt any three of the following:**

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- What are firewalls? How it protects the server?
- What are tables, chains, and rules? List common elements of rule.
- Write a short note on Certificate Authority.
- What are different steps to encrypt and decrypt files?
- What is NFS? What are advantages and disadvantages of NFS?
- What are steps for setting up samba file server?

**4. Attempt any three of the following:**

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- Write a short note on DNS and its hierarchy.
- What are different parameter used for dhcp.conf command?
- Discuss MTA and MDA in detail.
- Explain following parameter for secure internet configuration: myhostname, mydomain, myorigin, inet\_interfaces, mynetwork.
- Write down the steps to configure Apache for basic website services.
- Write a short note on virtual host.

[TURN OVER]

**5. Attempt any three of the following:**

- a. What are different elements of a shell script?
  - b. Write a script that create directory with a name Mumbai, sets \$user and \$group as the owner of directory and change permission mode to 770.
  - c. Write a short note on high-availability cluster requirement.
  - d. What are the different steps to create bond device.
  - e. Write a short note on TFTP server package.
  - f. Write a short note on kick-start file.
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