

(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

- What is the purpose of /etc/passwd configuration file? Explain the various fields in the /etc/passwd configuration file.
- Explain the use of su command with example.
- Explain the following yum commands with example:
yum search, yum list, yum info, yum install, yum remove
- Explain the PackageKit architecture.
- List and explain various yum variables.
- List and explain any five duties of Linux system administrator.

2. Attempt any three of the following:

15

- List and explain various file systems in Linux.
- What is the configuration file for network interface? List and explain various network configuration files.
- Write a short note on NetworkManager daemon.
- Explain the process of configuring SSH server.
- What is a runlevel? Explain various runlevels in Red Hat Enterprise Linux.
- Write a short note on SSSD.

3. Attempt any three of the following:

15

- Explain various agents involved in the mail transfer process.
- Explain the process to configure a DHCPv4 client.
- Write a short note on DNS.
- Explain various directives of the httpd.conf file.
- What is a VNC viewer? Explain the process to connect VNC server using GUI.
- What is Samba? List and explain its various daemons.

4. Attempt any three of the following:

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- List and explain various OID available under Host Resource MIB with Net-SNMP.
- What are queues? List and explain types of queues.
- Write a short note on Log Rotation.
- Explain the following memory usage commands: free, lsblk, blkid, findmnt, df, du, lspci.
- Explain the various parameters for configuration file for cron jobs.
- How to configure a Batch job? List the command line options for the same.

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5. Attempt any three of the following:

- a. What is firewall? Explain the concept of tables, chain, rules and policy in firewall.
- b. What is GPG key? How to create and exchange GPG keys?
- c. What is a shell script? What are the elements of a shell script? Write a shell script to check whether the number is even or odd.
- d. Write a short note on SSL.
- e. What is the use of test command? State and explain any five options used with test command.
- f. Write a short note on NAT.
