

**[Total Marks: 75]**

(2) Make suitable assumptions wherever necessary and state the assumptions made.

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(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.

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a. Write down the steps for: add a new User and Groups, modify its properties and view Groups via user manager application.

b. List and Explain duties of Linux system administration.

c. Explain two ways to gain administrative privileges using `su` and `sudo` command.

d. How to manage packages on RHEL using both YUM and PackageKit Suite.

- e. Explain adding, enabling, disabling YUM repository.

f. Describe installing package, package group and removing a package.

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a. Write down the steps to establish a wireless connection for mobile broadband.

b. Explain different kinds of partition in Linux.

c. Describe different types of file system and its properties.

d. Write a short note on ETH Tool.

e. Explain Network Configuration and Interface configuration files.

f. How to create Logical Volume with three different parts.

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a. Discuss the steps to install and configure VNC Server.

b. Write short note on MTA, MDA and MUA.

c. Explain all the steps to set up a Samba server.

d. What is the concept of APACHE HTTP Server? explain in brief.

c. Explain Mail Access Protocol.

f. What is DNS Server and explain its Nameserver zone with BIND.

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a. Explain **ps** and **top** command with their options.

b. Write down the steps to run the Net-snmp package.

c. Explain the basic configuration of RSYSLOG file.

d. How to install CRON and ANCRON daemons.

c. Explain the working with Queue in Rsyslog.

f. Discuss the following commands:

- a. lsblk
- b. lsblk -l
- c. blkid
- d. findmnt
- e. findmnt -l

5. Attempt any three of the following:

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- a. Write down the steps to allow basic services through the firewall using system-config-firewall.
  - b. What is tables, chains, and rule? How is rule composed? explain in brief.
  - c. Explain the configuration of NAT.
  - d. Write the steps for creating, exchanging, and managing GPG keys.
  - e. What are the elements of bash shell? Write one example in bash shell with executing script.
  - f. How to create and manage certificate using openssl command-line utility.
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