

22522

23124

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Assume suitable data, if necessary.
  - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) Define context switch
- (b) State the use of following commands :
  - (i) man
  - (ii) who
- (c) State modes of vi-editor.
- (d) State any two commands for managing disk space and also state their use.
- (e) Write advantages and disadvantages of Samba.
- (f) State any four features of Linux shell.
- (g) List all file manipulation commands in Linux.



**2. Attempt any THREE of the following : 12**

- (a) Explain the use of Crontab program in Linux.
- (b) Compare between (shell and Korn Shell)
- (c) Write the output of following commands :
  - (i) cp file1 c:
  - (ii) mv file1 c:
  - (iii) is -S
  - (iv) rm file1
- (d) Describe the use of following commands with example
  - (i) ping
  - (ii) netstat

**3. Attempt any THREE of the following : 12**

- (a) Draw and explain process state diagram.
- (b) Write commands to perform following :
  - (i) To sort files in ascending order
  - (ii) To display all the files with  
Character 'a' and any two characters after it
- (c) Compare between cpio and tar commands. (any 4 points)
- (d) Describe any four shell variables with its use.

**4. Attempt any THREE of the following : 12**

- (a) Describe generic fire wall configuration with suitable diagram.

- (b) Describe the use of following commands :
  - (i) cat
  - (ii) ls
  - (iii) grep
  - (iv) fgrep
- (c) Write steps to acquire super user status.
- (d) Describe the use of back slash (“\”) & and pipe (“|”) with example.
- (e) State and explain any two system calls used in process management and file management. (any two of each)

**5. Attempt any TWO of the following : 12**

- (a) Describe basic RAID levels supported on RHEL.
- (b) Write a shell script to accept a number from user and calculate sum of digits of entered number (Hint : number = 123, sum of digits  $1 + 2 + 3 = 6$ )
- (c) Write procedure to configure TCP/IP setting. Also state the use of IP address, subnet mask, default gateway and DNS server.

**6. Attempt any TWO of the following : 12**

- (a) Describe chmod commands with example.
  - (b) Write a shell script to accept two numbers from user. Calculate and display addition, subtraction, multiplication, division of entered number using choice entered by user. (Hint : Use case statement)
  - (c) Explain Network File System in detail with advantages and disadvantages.
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