

(2 ½ Hours)

[Total Marks: 75]

- N.B. 1) All questions are compulsory.  
 2) Figures to the right indicate marks.  
 3) Illustrations, in-depth answers and diagrams will be appreciated.  
 4) Mixing of sub-questions is not allowed.

**Q. 1 Attempt All (Each of 5Marks)****(15M)****(a) Multiple Choice Questions**

- Original creator of Linux is .....
  - Richard Stallman
  - Dennis Ritchie
  - Ken Thompson
  - Linus Torvald
- Linux is a .....
  - open source system
  - open source software
  - open server system
  - open server software
- ..... is not one of the Linux Distribution.
  - Ubuntu
  - Fedora
  - Microsoft Windows
  - Kali
- SSH stands for .....
  - Secure Shell
  - Source Shell
  - System Shell
  - Server Shell
- GNOME desktop stands for .....
  - GNU Network Object Model Environment
  - GCC Network Object Model Environment
  - GNU New Object Environment
  - GCC New Object Environment

**(b) Fill in the blanks**

- \_\_\_\_\_ puts the operating system in memory.
- \_\_\_\_\_ command is used to display information about command in Linux system.
- \_\_\_\_\_ command immediately shutdown and reboot the machine.
- ifconfig means \_\_\_\_\_.
- \_\_\_\_\_ command is used to reverse characters in every line of a file.

**(c) Short Answers**

- Role of Linux Kernel
- Use of RPM
- gedit
- Bourne Shell
- sudo command

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**Q. 2 Attempt the following (Any THREE)(Each of 5Marks) (15M)**

- (a) List Linux Distributions. Discuss any four of them.
- (b) Write any five features of Linux operating system.
- (c) Diagrammatically explain Linux architecture.
- (d) Explain the activities carried by shutdown process in Linux.
- (e) Write a note on Linux Community.
- (f) Define process. Explain ps command with its options and usage.

**Q. 3 Attempt the following (Any THREE) (Each of 5Marks) (15M)**

- (a) What is gedit and its features? Explain.
- (b) Explain any five general purpose utility commands with example.
- (c) Define command alias. How to create it? Give suitable examples.
- (d) Discuss File attributes in Linux.
- (e) How to modify permissions of files in Linux using chmod command? Explain.
- (f) List compression utility commands. Explain any two with examples.

**Q. 4 Attempt the following (Any THREE) (Each of 5Marks) (15M)**

- (a) What are the uses of root user in Linux system?
- (b) Write a note on FTP.
- (c) What is the purpose of commands:- **ssh, ping, hostname, telnet, route**. Give suitable example.
- (d) Explain Boolean operators **-a, -o** and **!** used in shell scripting with an example.
- (e) Define regular expression. What is the purpose of the following regular expression characters:- **^, \$, \*, , ?**
- (f) Write a shell script to read a month number from the user and display corresponding month name.

**Q. 5 Attempt the following (Any THREE) (Each of 5Marks) (15M)**

- (a) Give the importance of Linux in software ecosystem as Web Servers and Mobiles.
- (b) What is the purpose of following environment variables?  
**HOME, PS1, SHELL, PATH, PS2**
- (c) What are the rules for having passwords in Linux security?
- (d) Give the purpose of the following directories:-  
**/bin, /etc, /home, /sbin, /var**
- (e) List any three features of awk. Give its general syntax. Explain it with two different examples.