

(2½ 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.
  - 5) Assume suitable data wherever required.

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

1. In OSI network architecture, the routing is performed by
  - a) Data link
  - b) physical
  - c) network
  - d) session
2. How can you add Amit, a new user, to your system?
  - a) useradd
  - b) adduser
  - c) linuxconf
  - d) all of these
3. Which command is used to change directory?
  - a) pwd
  - b) rm
  - c) cd
  - d) mv
4. For text based calculator use \_\_\_\_\_ command.
  - a) calc
  - b) bc
  - c) cal
  - d) none of these
5. Full form of http \_\_\_\_\_
  - a) High through transfer policy
  - b) Hypertext transfer protocol
  - c) Head to this page
  - d) Hypertext transport protocol

**(b) Fill in the blanks****(?, Dennis Richie, pwd, \$, Linus Thorvald , x, I, U)**

1. \_\_\_\_\_ command is used with vi editor to delete a single character.
2. \_\_\_\_\_ founded the Linux Kernel.
3. \_\_\_\_\_ command is used to check working directory.
4. \_\_\_\_\_ command is used with vi editor to append text at start of line.
5. The default prompt symbol for the bash shell is \_\_\_\_\_ sign.

**(c) Short Answers**

1. Define Boot loader in Linux.
2. What is the half duplex mode in networking?
3. Define command line in Linux?
4. Write syntax for cp command?
5. How we get the calendar of the year 2018?

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

- Briefly explain runlevels of Linux.
- What is the architecture of Linux? Explain.
- Briefly explain the term process with its options and usage.
- What is file? Explain various categories of files in Linux.
- Give the booting steps? Explain.
- Explain in detail shut down process of Linux.

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

- Explain briefly three modes of vi editor.
- Explain following commands
  - cp
  - mv
  - cat
  - pwd
  - wc
- Explain in brief man, info and help command.
- What is the purpose of chmod command? Explain in detail.
- Write short note on command aliases.
- Explain following points in regards with environment variables:-
  - What is environment variable?
  - Command to view all environmental variable.
  - Command to view only global environmental variable.
  - Command to make local environmental variable.
  - Command to convert local to global environmental variable.

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

- Explain fields of /etc/passwd file.
- What is the purpose of regular expression? Explain its any four characters.
- Explain the commands: - telnet, route, hostname, ping, ifconfig
- List any three features of awk. Explain its syntax with examples.
- Write short note on HTTP.
- Write a shell script to display sum of factorial of first 'n' numbers.  
[Read value of 'n' from user.]

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

- List features of Linux. Explain any four.
- What are the uses of root? Give the purpose of sudo command.
- Write a short note on 'ssh'.
- Give the purpose of HOME, PS2, PS1, SHELL, USER shell variables.
- Explain any two file compression utility with examples.

\*\*\*\*\*