

Level: Bachelor  
 Programme: BCA  
 Course: Linux

POKHARA UNIVERSITY  
 Semester: Fall

Year : 2019  
 Full Marks: 100  
 Pass Marks: 45  
 Time : 3 hrs.

*Candidates are required to give their answers in their own words as far as practicable.  
 The figures in the margin indicate full marks.  
 Attempt all the questions.*

1. a) Explain the Linux with its architecture. What are the different Linux distribution? Explain any two. 3+5
- b) Define term 'culture of free software'? How Linux and UNIX is related? Explain. 2+5
2. a) Define and explain Shell? Differentiate between TCSH and KSH? 5+3
- b) What are the different Linux supporting files? Explain. Differentiate between ext2, ext3 and ext4 file system. 5+2
3. a) What is general partitioning scheme while installing Linux Operating System and what do you prefer or recommend? 8
- b) How can you monitor system performance in Linux? Explain with example 7
4. a) What are different run levels in Linux? Explain method to change these run levels. 8
- b) Write the function of following command with example.   
*rpm -i, fdisk -l, at, iptables, alias, chgrp, chmod, man, pstree, nslookup* 7
5. a) Write a program to check whether a given number is prime or not using shell scripts. 7
- b) How can you manage for scheduling a job in Linux, explain with example. 8
6. a) What is MYSQL? What are the packages and configuration of MYSQL? 7
- b) What is DHCP server? Define packages and configuration settings for both client and server sites. 8

2x5

7. Write short notes on any two:
- a) UNIX System
  - b) DHCP Message
  - c) Mounting and un-mounting

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester: Spring

Year : 2018  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

- |  |            |
|--|------------|
| 1. a) How does open source becomes famous? Write the advantages of Linux over other operating system.  | 8          |
| b) What is Grub? What is the configuration file for grub loader? Explain.  | 7          |
| 2. a) Write a shell script to find the largest among the four numbers.   | 8          |
| b) Give hardware requirement for installing Linux operating system. Also elaborate the steps for installing the Red-Hat Linux from digital optical disc storage? | 7          |
| 3. a) What are roles and responsibilities of a Linux administrator in Linux system?  | 8          |
| b) Explain the procedure of adding, removing and modifying user accounts in Linux with necessary commands and examples?  | 7          |
| 4. a) What is Backup and Restore? Explain any two backup tools available in Linux?   | 8          |
| b) How can you maintain the security in Linux? Write down the security check list in Linux.  | 7          |
| 5. a) What is DHCP server? How can you configure DHCP server and client?   | 8          |
| b) Explain the procedure of setting up of web server? How a web site can be hosted in LAN using Linux?   | 7          |
| 6. a) What is MYSQL Database? Write the configuration file and setting for MYSQL Database.   | 8          |
| b) What is BIND Server? Define configuration settings for DNS server.  | 7          |
| 7. Write short notes on <b>any two:</b>  | <b>2×5</b> |
| a) Run level in linux  |            |
| b) Simulation of ISP   |            |
| c) Kudzu Hardware Detection  |            |
| d) DNS Server  |            |

# POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester: Fall

Year : 2018  
Full Marks: 100  
Pass Marks: 45  
Time: 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. "IT is running on cloud and cloud is running on Linux." Justify the statement. 7
2. a) Write the purpose of following directories in Linux. 8
- i) /home      v) /dev  
ii) /boot      vi) /var  
iii) /tmp      vii) /proc  
iv) /root      viii) /etc
- b) What is initrd? Explain the stages of Linux boot process. 7
- c) What is SUDO? Why not use root account all the time? Explain. 8
3. a) What are modules on Linux system? How do you use them? Explain. 7
- b) Explain the following user management commands with example of each. 8
- useradd, usermod, groupadd, userdel
4. a) What do you mean by Shell Script? Write a shell script program to find the largest integer among given three integers. 7
- b) What do you mean by shadow password file? Explain how you can make your password more secure and stronger. 8
5. a) What do you mean by web server? Why are they needed? Explain. 7
- b) What do you mean by DHCP, DHCP server and DHCP client? How DHCP works? Explain. 8
- c) Why is DNS important? Explain the process of DNS configuration in Linux. 7
- d) What do you mean by database server? Explain the configuration of database server in linux. 8
7. Write short notes on **any two:** 2×5
- (a) Command shell  
(b) File Permissions  
(c) ISP Simulation

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester –Fall

Year : 2017  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. a) What is linux file System? Explain file system hierarchy with their special purposes in linux. 7  
b) What do you mean by partioning? Explain about main partioning required while linux installation. 8
2. a) What is role of super user in linux? Explain about some tools to monitor system performance in linux. 7  
(b) Write the command Syntax for the following purpose. 8
  - i) To create a user “Linux” with password “redhat”
  - ii) To change the password for that user to “fedora”
  - iii) To create a group “Hackers”
  - iv) After all assign the group “Hackers” for the user “Linux”
  - v) After all provide comment name “Blackcat” and login shell “bash” for that user.
  - vi) Then assign the expiry date for that user account.
  - vii) To delete that group
  - viii) To remove that user
3. a) What is Backup and Restore? Explain any one Backup tool in Linux. 7  
b) How can you make secure files in Linux? Explain. 8
4. a) What are modules on Linux system? How do you use them? Explain. 7  
b) What do you mean by Disk Quata? Write the process of implementing Disk Quata in Linux. 8
5. a) What is role of DNS? Explain DNS configuration process in linux with example. 7  
b) Why is Apache Web Server popular? Discuss Apache Web Server configuration. 8

6. a) What is the purpose of DHCP server in computer network? Write the process of configuring DHCP server and client. 7
- b) What is Database Server? Explain configuration setting for MYSQL as database server. 8
7. Write short notes on any two: 2×5
- a) Scheduling System Tasks.
  - b) Integration is servers.
  - c) Linux vs. Unix

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester: Fall

Year : 2016  
Full Marks: 100  
Pass Marks: 45  
Time: 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. a) Why Linux operating system is so popular? Differentiate between open source software and freeware. 7
- b) What do you mean by booting? Define the function of following command with examples. (8)
  - a. ls -l ↴
  - b. df ↴
  - c. du ↴
  - d. chmod 741 ↴
  - e. top ↴
  - f. touch me ↴
  - g. fdisk -l ↴
2. a) Write step by step procedure to install Red-Hat Linux from DVD 7
- b) What is Kudzu? What are the module configurations commands write with example of each? 8
3. a) What do you mean by run level? Explain different run level with their function. 8
- b) What do you means by disk quota? Write the steps of setting user disk quotas. 7
4. a) Explain the file permissions in detail. 7
- b) For what we need backing-up and restoring features in operating system? Explain backing up strategies. 8
5. a) Explain the procedure of setting up of web server? How a web site 8

- can be hosted in LAN using Linux?
- b) Why DHCP server is necessary? Explain about the configuration file used? 7
6. a) What do you means by database server? Write the configuration for mysql database server? 7
- b) How can you configure DNS server in Linux system? Write down the configuration files. 8
7. Write short note on **any two:** 2×5
- a) ISP simulation
  - b) Vi text editor
  - c) Root login vs super login

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux (New)

Semester: Fall

Year : 2015  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. a) Discuss the principle of Linux as open source software? Mention advantage and disadvantage. 7
- b) What is Grub? What is the configuration file for grub, loader? Explain. 8
2. a) Discuss the different shells present in Linux. Also give advantage and disadvantages for each shell. 8
- b) Write the function and syntax of user management command *useradd*, *usermod*, *gpasswd*, *userdel* & *groupmod*? 7
3. a) Write the syntax for the file permission in Linux. Under the following circumstances what will be the file permission command for the file named "mydoc.txt". 7
  - i) Write by owner.
  - ii) Read by group
  - iii) Execute by anybody
  - iv) Read, write, execute for all
  - v) Read, write and execute for owner, read and execute for group
  - vi) Read and write by anybody
- b) How do you maintain security on Linux? Write down the security check list in Linux. 8
4. a) Write a program in shell script for the following: 7
  - i) Read's user's name, DOB, place and print them.

- ii) Add two numbers and print the result.
- b) Why is Apache Web Server popular? Discuss Apache web server's main server configuration and directive's in detail. 6
5. a) What is DHCP server? How can you configure DHCP server and client? 8
- b) What is the package name and daemon of MYSQL? How do you check and install MYSQL package? How do you start MYSQL service? 7
6. a) Define BIND server. Explain configuration setting for DNS server. 8
- b) How can we reconfigure hardware with kudzu? Write its step. 7
7. Write short notes on **any two:** 2×5
- a) Super user and root login
  - b) Disk quotas
  - c) System startup and shutdown

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester-Spring

Year : 2015  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Attempt all the questions.*

- |    |  |     |
|----|--|-----|
| 1. | a) What is Linux File System? Explain file system hierarchy with their special purpose in Linux.   | 7   |
|    | b) What do you mean by partitioning? Explain about main partitioning required during Linux installation.   | 8   |
| 2. | a) What is kudzu? How can you configure modules in Linux?<br>b) Explain the role of the following commands with example:<br>Sudo, useradd, userdel, gpasswd.       | 8   |
| 3. | a) Is password protection only a way to make secured the Linux files?<br>Explain.<br>b) Why is Apache Web Server popular? Discuss Apache Web Server configuration. | 8   |
| 4. | a) Define DHCP. How can you set up DHCP server and client?<br>b) What is database server? Define configuration setting for MYSQL database server and client sites. | 8   |
| 5. | a) What do you mean by backup and restore? Explain the backup process in Linux.<br>b) Explain the process of checking disk quotas in Linux.                        | 8   |
| 6. | a) What are the roles of using DNS in network? Write the process to configure domain using BIND.<br>b) Explain the various processes for ISP installation.         | 7   |
| 7. | Write short notes on any two:<br>a) Linux as an Open Source<br>b) NIS<br>c) Root login   | 2×5 |

**POKHARA UNIVERSITY**

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester - Spring

Year : 2014  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

- a) What are the advantages and disadvantages of Linux Operating system over other operating system? 8
- b) What is Kudzu? How can you configure modules in Linux? 7
2. a) Define the function of following command with examples. 7
- i. cat ↴
  - ii. pstree ↴
  - iii. du ↴
  - iv. chmod 620 ↴
  - v. top ↴
  - vi. touch pokhara ↴
  - vii. fdisk -l ↴
- b) Give the hardware requirement for installing Linux operating system. Also elaborate the steps for installing the Linux operating system. 8
3. a) How do you create a user account with login name "pokhara", Comment name "pokhara City", user id "550" and assign default login shell as csh shell. Also explain the /etc/password file for the above created account. 8
- b) What do you means by disk quota? Write the steps of setting user disk quotas. 7
4. a) What do you mean by backup and restore? How can you maintain your file secure in Linux system? 8
- b) What do you mean by run level? Explain different run level with their function. 7

5. a) What is Apache HTTP server? What are the daemons and package required for Apache HTTP server? Write the location of configuration files and log files of Apache HTTP server. 8
- b) What is the work of the DHCP server? Explain DORA process in DHCP server. 8
6. a) What is MYSQL Database? Write the configuration file and setting for MYSQL Database 8
- b) What is DNS Server? Define configuration file and setting for DNS server. 7
7. Write short notes on **any two**: 2×5
- a) vi text editor
  - b) NIS server
  - c) ISP simulation

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester – Fall

Year : 2011  
Full Marks: 100  
Pass Marks: 45  
Time : 3hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Attempt all the questions.*

- |  |            |
|--|------------|
| 1. a) Write about Linux Operating System. "Linux is an Open Source", what does it mean?  | 5          |
| b) What is file system in Linux? Explain the file permission in Linux file system.   | 10         |
| 2. a) What are the main partitioning required while installation of Linux? Explain.  | 7          |
| b) What is kudzu? How can you configure modules in Linux?  | 8          |
| 3. a) How do you create a user account? How do you create a user account with login name "Binod", comment name "Binod Paudel" and assign default login shell as tcsh shell. Also explain the /etc/passwd file. | 8          |
| b) What is back up? What are back up? What are backup strategies used in Linux?  | 7          |
| 4. a) Write down the steps while setting up a LAN (simple wired Campus Lab network), from planning, configuration and testing.   | 8          |
| b) Write the step to creating a dial – up connection with the network configuration window?  | 7          |
| 5. a) Explain different issues in configuring mysql server with example.   | 7          |
| b) Why is Apache Web server popular? Discuss Apache web server's main server configuration.  | 8          |
| 6. a) Define DHCP and how do you configure a DHCP Server?  | 7          |
| b) Explain Different issues in configuring DNS in Linux with example.  | 8          |
| 7. Write short notes on <b>any two:</b>  | <b>2×5</b> |
| a) Multimedia in Linux   |            |
| b) Samba server  |            |
| c) Monitoring Web server activities  |            |

## POKHARA UNIVERSITY

Level: Bachelor  
Programme: BCA  
Course: Linux

Semester – Spring

Year : 2010  
Full Marks: 100  
Pass Marks: 45  
Time : 3 hrs.

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Attempt all the questions.**

1. a) How does open source becomes famous? Write the advantages of Linux over other operating system? 5
- b) Define and explain VI editor. What do you know about Linux file hierarchy system and the important directories? 10

**OR**

Define the function of following command with examples. 10

- i. fdisk
- ii. Passwd
- iii. touch BCA8
- iv. Top
- v. sudo

2. a) What is general partitioning scheme while installing Linux Operating System and what do you prefer or recommend? 8
- b) What is mysql server? Write steps to setup mysql server. 7
3. a) What are the main responsibilities of a System Administrator in a Linux System? Differentiate between root login and normal user login. 8
- b) Define the role with syntax of following command in user management: 7  
*useradd, usermod, userdel, gpasswd*
4. a) Discuss File Security Concepts in Linux and protecting LINUX by filtering network access. 8

