

2014
(4th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Course No. : 403

(UNIX and Shell Programming)

(PART : A—OBJECTIVE)

(Marks : 25)

*The figures in the margin indicate full marks
for the questions*

SECTION—I

I. Put a Tick (✓) mark against the correct answer in the
brackets provided : 1×10=10

1. To know the version number of your UNIX
system, this command is used

(a) `uname -s` ()

(b) `uname -r` ()

(c) `uname -n` ()

(d) `uname -v` ()

2. The password encryption is stored in the file

(a) /etc/shadow ()

(b) /etc/passwd ()

(c) /usr/bin ()

(d) None of the above ()

3. The ls-l command

(a) lists the directory attributes ()

(b) lists the attributes of all files in the current directory ()

(c) sets the permissions for users ()

(d) None of the above ()

4. The size of the file /dev/null is always

(a) 1 ()

(b) 2 ()

(c) 0 ()

(d) -1 ()

5. To run a job with a low priority, the command name should be prefixed with

- (a) bg ()
- (b) nice ()
- (c) fg ()
- (d) suspend ()

6. This command displays the contents of all news items regardless of whether they have been read or not.

- (a) news -a ()
- (b) news -n ()
- (c) news -s ()
- (d) news -o ()

7. By default, the page size used by pr command is _____ lines.

- (a) 66 ()
- (b) 90 ()
- (c) 72 ()
- (d) None of the above ()

8. The symbol `—` is often referred to as a here document.

(a) `>>` ()

(b) `$!` ()

(c) `<<` ()

(d) `&!` ()

9. The prompt of root is

(a) `#` ()

(b) `$` ()

(c) `!` ()

(d) `&` ()

10. Which command sends the word count of the file `infile` to the `newfile`?

(a) `wc <infile> newfile` ()

(b) `wc infile > newfile` ()

(c) `wc infile | newfile` ()

(d) `wc infile _ newfile` ()

II. Tick (✓) whether *True (T)* or *False (F)* : 1×5=5

1. The system commands used by all users are located in the directories /bin and /usr/bin.

(T / F)

2. The set command is used to alter file permissions.

(T / F)

3. The nohup command, when prefixed to a command, permits execution of the process only while the user is logged in.

(T / F)

4. A pattern can be matched at the beginning of a line with a ^, and at the end with a \$.

(T / F)

5. Shutdown -y -g|20 -i| means shutdown without grace period and reboot.

(T / F)

(6)

SECTION—II

III. Answer the following questions : 2×5=10

1. What is the difference between cat and more command?

(7)

2. How do you switch to a superuser status to gain privileges?

(8)

3. What is a pipe? Give examples.

4. What is ps? What is its purpose?

(9)

5. What are the two data structures that a kernel contains?

IV/BCA/403

2014

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BACHELOR OF COMPUTER APPLICATIONS

Course No. : 403

(UNIX and Shell Programming)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

1. (a) Explain the salient features of UNIX operating system. 6
- (b) Explain the following commands with example : 4
 - (i) cp
 - (ii) mv
 - (iii) rm
 - (iv) comm

14G—360/607a

(Turn Over)

Or

- (c) What is shell? List out various features of shell. 4
- (d) Explain the process creation mechanism and list the various states in the life cycle of a process. 6
2. (a) What is parent-child relationship? With the help of a neat diagram, explain UNIX file system tree. 5
- (b) With suitable examples, bring out the difference between absolute and relative pathnames. 5

Or

- (c) Briefly describe the different ways of setting file permissions. 6
- (d) What are hard links and symbolic links? 4
3. (a) What are the three modes of vi editor? Explain. 6
- (b) Explain the following commands with examples : 4
- (i) tee
 - (ii) batch

Or

- (c) What is the difference between wildcard and regular expression? Explain with examples, basic regular expression and extended regular expression. 6
- (d) Explain the following filters with examples : 4
- (i) paste
 - (ii) sort
4. (a) Write a shell script to create a menu which displays the list of files, users of system and processes of users based on the user's choice. 6
- (b) Explain the following with reference to shell programming : 4
- (i) test
 - (ii) trap
- Or
- (c) Write a shell script to accept a text filename and count the number of words, lines and characters. 6
- (d) Explain here document with an example. Also, mention its use. 4

(4)

5. (a) What are the various privileges of system administrator? How are these privileges exercised? 4

(b) Explain how disk space management is performed and the commands involved in performing it with suitable examples. 6

Or

(c) Which two commands in UNIX system let two users chat with each other? Explain them. 4

(d) Discuss the process of mounting and unmounting a file system. Explain the commands for both with options, if any. 6
