

Name :

Roll No. :

Invigilator's Signature :

CS/BCA/ SEP.SUPPLE/SEM-5/BCA-502/2012

2012

UNIX AND SHELL PROGRAMMING

Time Allotted : 3 Hours

Full Marks : 70

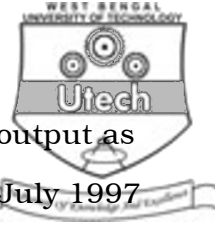
The figures in the margin indicate full marks.

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

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : $10 \times 1 = 10$
 - i) What does kill \$! Do ?
 - a) kills all processes spawned by user
 - b) kills all background processes
 - c) kill the most recent background process
 - d) kills the oldest background process.
 - ii) The command for deleting a directory which is empty is
 - a) rmdir
 - b) rm - r
 - b) rm*
 - d) rm - rd.
 - iii) To see the last access time of various files in a file system the command is
 - a) ls-lu
 - b) ls-l
 - c) ls-lat
 - d) ls-mt.



- iv) The command `cal j 1997` would give the output as
 - a) the calendar of January, June and July 1997
 - b) only calendar of January 1997
 - c) an error
 - d) None of these.
- v) `$$` represents
 - a) Exit status of last command
 - b) Name of executed command
 - c) PID of the current shell
 - d) None of these.
- vi) `Sort-n emp`
 - a) sort by primary key
 - b) numeric sorting
 - c) sort by secondary key
 - d) none of these.
- vii) The available disk space can be determined under UNIX using the command
 - a) `dir`
 - b) `df`
 - c) `du`
 - d) `file`.
- viii) The UNIX command `"a.out \&"` runs the program `a.out`
 - a) with highest priority
 - b) only when no other process is running on the system
 - c) in the background
 - d) none of these.



- ix) The hidden file in UNIX
- has a special bit associated with the descriptor
 - has names starting with a dot
 - can be accessed only by the operating system kernel
 - none of these.
- x) Echo '\$ SHELL' will print
- SHELL
 - \$ SHELL
 - Value of SHELL variable
 - None of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

- What does the fork system call do ? What does it return ? 3 + 2
- Differentiate between Multiprogramming and Multitasking. 5
- What do you mean by positional parameters of shell programming ? 5
- What do you mean by a 'daemon' ? 5
- Write short notes on the following UNIX commands with different options : $1 \frac{1}{2} + 1 \frac{1}{2} + 2$
 - Date
 - Who
 - Passwd.



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) Briefly explain the features of Unix operating system.
b) What is the difference between the following vi commands ?
(i) :w (ii) :q! (iii) :wq (iv) zz.
c) What do you mean by link of a file ? What is symbolic link ? Why is it needed ? $5 + 4 + 2 + 2 + 2$
8. a) Name five administrative functions that cannot be performed by a general user.
b) What is the difference between Sk and Su- xyz ?
c) What are the activities performed by shutdown and chmod commands ?
d) Write a function that will generate and print first n Fibonacci number. $4 + 2 + 4 + 5$
9. a) Which attributes of a file are contained by mode table ?
b) Explain filter commands. Give example. What are the options in grep command ? Explain briefly. What does the command 'touch a' do ? $5 + 3 + 5 + 2$
10. a) Write a shell script to check whether an integer is prime or not.
b) Explain Unix file system.
c) What is signal ? What is its Job ? $6 + 6 + 1 + 2$
11. Write short notes on any *three* of the following : 3×5
- a) Hard link and Soft link
 - b) Internal and external commands
 - c) Mounting and Un-Mounting partitions
 - d) Unmask and chmod.

