

Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/BCA/SEM-5/BCA-502/2013-14**

**2013**

**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 × 1 = 10

- i) The UNIX command 'a.out\&' runs the program a.out
  - a) with highest priority
  - b) when no other process is running on the system
  - c) in the background
  - d) none of these.
- ii) The cal command is used to
  - a) show calendar
  - b) use calculator
  - c) do calculations
  - d) none of these.
- iii) pwd command is used for
  - a) change password of administrator
  - b) change password of user
  - c) view the current working directory
  - d) all of these.

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- iv) The command used to see the user processes is
- a) ps
  - b) process
  - c) ls
  - d) dir.
- v) The available disk space under UNIX can be determined by
- a) dir
  - b) df
  - c) cp
  - d) ls.
- vi) In UNIX mounting means
- a) copying all the files from one file system to another
  - b) moves all the files from one file system to another
  - c) loading a file system from backup medium like tape
  - d) providing a link to the file system to be mounted so that it appears as a subdirectory.
- vii) The hidden file in UNIX
- a) has special status bit associated with the file descriptor
  - b) has names starting with dot
  - c) can be accessed only by the operating system
  - d) none of these.
- viii) The chmod command in UNIX
- a) changes the current execution status from user mode to kernel mode
  - b) makes a file hidden
  - c) changes the access permission of a file or directory
  - d) none of these.

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- ix) Chown command in UNIX changes
- a) file permission
  - b) ownership of a file
  - c) priority of a process
  - d) none of these.
- x) Basename student. `ls -l` the output of this command is
- a) student
  - b) student.
  - c) `ls`
  - d) `.ls`

**GROUP - B**

**( Short Answer Type Questions )**

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

2. What do you mean by Internal and External commands ?
3. What are the different run levels in UNIX ?
4. What is the utility of `ls` and `ls -a` command ?
5. What is *t*-node ? Explain different attributes of *t*-node.
6. How will you replace "You" with "us" in vi editor ?

**GROUP - C**

**( Long Answer Type Questions )**

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

7. a) Write the command you will give to set read, write and execute permissions, group member read and execute permission and others only read permission for a file named `zyx.txt`. 5
- b) State the importance of PID and PPID. Which process has the maximum number of child processes ? 5
- c) Write a shell script to print all the odd numbers from 1 to 15. 5

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8. a) Briefly explain the features of UNIX operating system. 5  
b) Briefly state with syntax and example the following loops : while, until, for. 5  
c) What do you understand by root directory ? 3  
d) What is the importance of home directory ? 2
9. a) What is a process ? 2  
b) Explain briefly foreground and background job execution in UNIX system. 3  
c) Explain with examples egrep and fgrep. 5  
d) Write briefly on the following commands :  
mount, umask, fsck, kill. 5
10. a) How can you use 'cat' command to create a new file in UNIX ? Explain with example. 3  
b) Write a shell script to check whether a file is readable, writeable or executable. 6  
c) Explain the shutdown command with at least two options. 4  
d) Can ordinary user invoke shutdown command ? Explain the significance of run level 0, 1, 6. 2
11. Write short notes on any *five* of the following : 5 × 3
- a) Cal
  - b) Touch
  - c) Basename
  - d) UNIX external and internal commands
  - e) Who
  - f) Mailx.