Name:
Roll No. :
Invigilator's Signature :

## CS/BCA/SEM-5/BCA-502/2012-13

*X*-window.

## 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)	То	To counting number of lines in a file which command is					
		use	ed					
		a)	cat	b)	1s			
		c)	wc	d)	chmod.			
	ii)	In t	In the core of the operating system is called					
		a)	hardware	b)	kernel			
		c)	shell	d)	<i>X</i> -window.			
	iii)	Wh	ich one works a	as interface 1	between the	user &	the	
		ker	nel ?					
		a)	Hardware	b)	Kernel			

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d)

Shell

c)

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iv)	To display an informative listing of the users						
	is used.						
	a)	who	b)	1s			
	c)	both (a) and (b)	d)	none of these.			
v)	To remove a directory command is used.						
	a)	rmdir	b)	mkdir			
	c)	tree	d)	none of these.			
vi)	To know your current directory we use						
	a)	cd	b)	chmod			
	c)	both (a) and (b)	d)	pwd.			
vii)	The UNIX command 'cp ch * book'						
a) copies all files starting with ch to the dire							
book							
	b) copies all files with three character names a						
	ctory book						
	c) compares whether file starting with ch exis						
directory book							
viii)	s / home / user / xyz /						
	prog. A possible command to change to a directory home / user / abc / letter is  a) cd / / abc / letter  b) cd ./ ./ abc / letter						
	c) cd./home/user/abc/letter						
	d)	none of these.					

- ix) The UNIX command 'rm -r project' will
  - a) delete the file project from the current directory
  - b) delete all the files from the directory project
  - c) recursively delete the directory project and all its sub-directories
  - d) none of these.
- x) The hidden file in UNIX
  - have a special status bit associated with the file descriptor
  - b) have names starting with a dot
  - c) can be accessed only by the operating system kernel
  - d) none of these.

### **GROUP - B**

### (Short Answer Type Questions)

Answer any three of the following

 $3 \times 5 = 15$ 

- 2. How do you change File Access Permissions in Unix?
- 3. What is i-node? Explain fields of an i-node.

2 + 3

- 4. Discuss mount and unmount system calls.
- 5. What happens when you execute a program? Define zombie.

3 + 2

6. Define hard link and soft link.

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#### **GROUP - C**

### (Long Answer Type Questions)

Answer any *three* of the following.

7. Describe mechanism of process creation. How a shell is created? What are internal and external commands? Where

are the security levels available in UNIX? 5 + 3 + 4 + 3

8. Define kill command. How you can kill the last background job? How you can execute a low priority job before a high priority job? What are the different environment variables in Unix? Explain ps command. 2 + 3 + 3 + 4

9. What are piping operators? What is redirection? Describe different redirection operators. Write a shell script to find out prime numbers within 100 to 500. 2 + 2 + 3 + 8

10. a) What is quoting? What are three quote tokens?

- b) What is regular expression? List out the components
- c) What are egrep and fgrep? Give examples.
- d) Differentiate between line editor and screen editor.

(2+2)+4+4+3

 $3 \times 15 = 45$ 

11. Write short notes on any *three* of the following:  $3 \times 5$ 

- a) gzip and gunzip
- b) awk
- c) tar
- d) Common shells in Unix.

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