Name :	4
Roll No.:	
Inviailator's Sianature :	

### CS/BCA-(SEPARATE SUPPLE)/SEM-5TH/BCA-502/2011

## 2011 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) The command that compares two files and suggests changes to make them identical is
  - a) cmp

b) cat

c) comm

- d) diff.
- ii) Which of the following files get redirected using grep "name" myfile 1> yourfile?
  - a) standard input
  - b) standard output
  - c) standard error
  - d) system will display an error message.

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- iii) In vi, 3yy in command mode will
  - a) copy current line and two lines before it for later pasting.
  - b) copy current line and two lines after it for later pasting.
  - c) delete current line and two lines before it for later pasting.
  - d) delete current line and two lines after it for later pasting.

#### iv) cat<<test will

- a) redirect standard input from file test.
- b) continue reading from the standard input till **test** is not entered as the only word in a line.
- c) append standard input with the contents of the file test.
- d) system will display an error message.
- v) set command cannot be used to
  - a) place values into the positional parameters.
  - b) display a list of the environment variables.
  - c) act as a debugging toll for shell scripts.
  - d) change the system clock.
- vi) Which of the following commands cannot be used to take a backup of files?
  - a) cp

b) tar

c) cpio

d) dd.

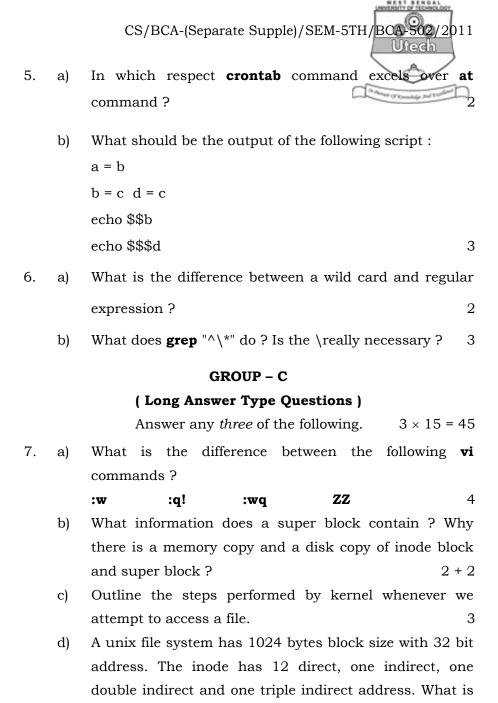
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				<u>Uledh</u>		
vii)	Whi	ch of the following	comman	ds can be used to view a		
	file	and move either for	wards or	backwards in it?		
	a)	cat	b)	head		
	c)	more	d)	pr.		
viii)	Whi	ch of the following i	s not a c	ommand separator?		
	a)	1	b)	;		
	c)	&	d)	#.		
ix)	To	avail the services	provide	d by a server on the		
	Inte	rnet, it is necessary	for the a	application to specify		
	a)	Ethernet address	of the ser	ver.		
	b)	IP address of the s	erver.			
	c)	The port number	of the se	ervice on the server and		
		the IP address of t	he server	r <b>.</b>		
	d)	The port number	of the se	ervice on the server and		
		the Ethernet addre	ess of the	e server.		
x)	Whi	ch of the following i	s not an	X client ?		
	a)	xargs	b)	xterm		
	c)	xcalc	d)	xclock.		
GROUP – B						
( Short Answer Type Questions )						
		Answer any three	e of the fo	ollowing. $3 \times 5 = 15$		
a)	Wri	te a single command	d in unix	to do the following:		
	То	save the output of	the 'who	o' command in a file as		
	well	as display it on the	screen.	2		

2.

## CS/BCA-(Separate Supple)/SEM-5TH/BCA-502/2011 What should be the output of the following shell scrip b) a = \* echo \$a 2 echo "\$a" What should be the output of the following echo c) statement? echo \$\$ 1 3. Write command in unix to do the following: a) To take input from the file IN and to write its sorted 2 output to the file OUT b) What should be the output of the following shell script a = "\*" b = a3 echo \$b 4. What do you mean by command substitution? Provide a) 2 example. What should be the output of the following script: b) 3 IFS = +set economists + are + seldom + right echo \$3 \$4 \$ #

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the maximum file size it can access?

5

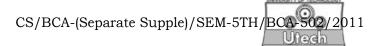
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8.	a)	Interpret this command:
		grep "^[^^]" filename
	b)	What do you mean by a daemon? How will you kill a
		daemon ? Which process cannot be killed by kill
		command?
	c)	What is the function of $\mathbf{exec}$ system call ? What is the
		difference between a process run with & and run with
		<b>nohup</b> ? 2 + 2
	d)	Write a shell script that determines the period for which
		a specified user is working on the system. 4
	e)	How do you delete all lines beginning with a # except
		the line #!/bin/ksh? 2
9.	a)	Produce a file "temp" which contains the modification
		and access time along with the filenames and
		permission fields. The line containing the total number
		of blocks should not be present in the output. 4
b)	b)	What does a sticky bit for a directory and an executable
		file signify ? What is absolute assignment ? Give
		example. 2 + 2
	c)	How can you use file command to look for files from a
		directory tree ?
	d)	What is cron? Interpret the following crontab entry
		00-10 17 * 3,6,9,12 5 int_connect.sh
		1 + 2
	e)	Write a shell script which will make other files
	,	executable as well as execute it.

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- 10. a) How can you set your own directory (/home/student/henry) in the existing **PATH**?
  - b) Explain \$#, \$?, \$@, \$! special parameters of shell. 2
  - c) Write a shell script, which get executed the moment the user logs in. It should display the messages "Good morning" / "Good afternoon" / "Good evening" depending upon the time at which the user logs in.
  - d) Write down a **sed** script in file f1 which will change all "chatterjee" to "chakraborty" and all "paul" to "pal". 3
  - e) Write down single sort commands for the following: 4
    - i) Sort a file f1 according to the second field and remove duplicate lines from it.
    - ii) Sort a file f1 where the primary key is 3rd field and secondary key is 2nd field.
- 11. a) In what way does the kernel differentiate between device files and ordinary files? What do you mean by password ageing?
  - b) Which variable is set by reading the first field of/etc/passwd? Why was the password encryption moved from/etc/password to/etc/shadow?
  - c) What are the two main functions of init process? What is the function of getty process?
  - d) Suppose a user has renamed some files in current directory using a command like *mv filename filename.\$\$*. Write a shell script to search all such files and rename them such that they do not contain the shell PID.