

Code No-: X0526

R07

SET - 1

II B.Tech I Semester, Supplementary Examinations, May – 2012

UNIX AND SHELL PROGRAMMING

(Com. to CSE, IT)

Time: 3 hours

Max Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Explain the following commands with suitable examples. umask, chmod, mkdir, rmdir, chdir, chown, cpio, sort.  
b) Explain about the features of UNIX. (8M+8M)
2. a) Explain about unix file structure.  
b) Explain various text processing utilities. (8M+8M)
3. a) What is a filter? How they are used in UNIX program? Explain any 3 filter commands.  
b) Write a shell program to arrange three numbers in ascending order. (8M+8M)
4. a) Define grep. Briefly explain the differences between fgrep, egrep with examples.  
b) List the differences between grep and sed. (8M+8M)
5. a) Explain about awk command and its options.  
b) List various applications of awk, grep and sed. (8M+8M)
6. a) Explain the environmental variables in korn shell.  
b) Explain how arguments are validated in korn shell. (8M+8M)
7. a) Explain startup and shutdown scripts in C-shell.  
b) Explain different special parameters that are available in C-shell. (8M+8M)
8. Define system call. Explain in detail about the working and syntax of file structure related system calls.

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1. a) Explain how Unix commands can be divided into external and internal commands.
b) "UNIX" operating system provides more security than other operating system support your answer. (8M+8M)
2. Explain the following with syntax and example
a) Sort
b) Tail
c) Head
d) Uniq (4M+4M+4M+4M)
3. a) Write a shell script to find out whether a given number is prime number or not.
b) Explain the command that eliminates duplicate entries in a file along with options. (8M+8M)
4. a) Define grep. Briefly explain the differences between fgrep, egrep with examples.
b) List the differences between grep and sed. (8M+8M)
5. Explain awk record and write a program to display student records. (16M)
6. a) List C character codes for print. Explain?
b) Explain the output statement in korn shell. (8M+8M)
7. Discuss all the files which are used for environment customization in C shell. (16M)
8. a) Briefly explain about the following system calls
open, create, close, read and write.
b) Briefly explain about the following system calls
lseek, syslink, stat, lstat, chmod, chown. (8M+8M)

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SET - 3

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1. a) Explain the structure of a UNIX command with an example.  
b) How many options are there in “ls” command? Explain? (8M+8M)
2. Explain about the UNIX file system. (16M)
3. a) Write a program to display the number of lines, words and characters in a file.  
b) What are the system variables in UNIX .Explain? (8M+8M)
4. Explain in detail about grep operation and draw the flow chart with an example. (16M)
5. a) Write a program to check whether a given number is a Armstrong number or not.  
b) Explain in detail about any four string functions. (8M+8M)
6. a) What is the use of toupper and tolower functions? Explain them with suitable example.  
b) Find the line that does not match a regular expression in korn using grep. (8M+8M)
7. a) What is the exit status of a command? Explain with example.  
b) Describe about “eval” command with an example. (8M+8M)
8. Explain the following system calls with an example.  
a) File handling system calls  
b) Error handling system calls  
c) Process control system calls (5M+5M+6M)

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**SET - 4**

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1. Explain the following commands with their syntax and examples.
 - a) man
 - b) echo
 - c) passwd
 - d) date(4M+4M+4M+4M)
2. Describe the file handling utilities in detail. (16M)
3.
 - a) Explain the working environment or built-in variable of shell
 - b) Write a program to open the command ls and give the output to the command through which we count the number of files. (8M+8M)
4.
 - a) List all regular expressions of sed.
 - b) Explain the following commands
 - i) Delete patterns space commands.
 - ii) Change commands.
 - iii) Append commands. (8M+8M)
5.
 - a) How do you delete all blanks lines from a file.
 - b) Write an awk program to print only the odd numbered lines of a file. (8M+8M)
6.
 - a) Explain in detail about the two special files in Korn shell.
 - b) Differentiate between the special files of C shell and korn shell. (8M+8M)
7.
 - a) Explain piping in C shell with example.
 - b) Write a C shell program to copy the content of one file to another. (8M+8M)
8.
 - a) Write a C program to print the type of specific file (regular, device, and directory).
 - b) Explain about file descriptor. (8M+8M)