CSE/IT 223 (R-15)

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II/IV B.Tech. DEGREE EXAMINATIONS, NOV/DEC- 2019

Second Semester

CSE/IT

UNIX SHELL PROGRAMMING

Time: Three Hours **Maximum marks:60**

Answer Question No.1 Compulsory **6X2=12 M**

Answer ONE Question from each Unit **4X12=48 M**

1. a) Syntax of mkdir and rmdir
   b) Purpose of sed and tty utilities
   c) Write about Sticky Bit
   d) What is a Zombie process?
   e) Give the function to get a semaphore Id.
   f) What is Pipe? Give its importance

UNIT-I

2. a) Give the syntax of grep command and what does grep "^*" command do?
   b) Write about hard links and symbolic links.
   c) Write about cut and paste commands with two options associated with it.

(OR)

3. a) Write the command which sorts a list of files and removes duplicates lines and finally writes the result into an output file.
   b) If a directory has the permissions 777 and a file in it has the permissions 000, write the security implications from this.
   c) Explain the salient features of UNIX.

UNIT-II

4. a) Write a shell script to display Good Morning, Good After Noon and Good Evening according on the present time.

P.T.O

b) Explain different control structures that are supported in Bourne Shell with suitable syntax and examples for each.

(OR)

5. a) Give functions of shell. Write a shell script which takes 2 file names and if their contents are same then second one will be deleted.

b) Write about shell variables and environment variables.

UNIT-III

6. a) Write a C program to create a directory, put a file into it and remove it.

b) Write about stat, fstat, dup and dup2 system calls. Give suitable syntax and example for each.

(OR)

7. a) Write a C program to create a chain of processes in which every parent has only one child.

b) Write about the following System function calls.

i) execle ( ) ii) execlp ( ) iii) execve ( ) iv) execvp ( )

UNIT-IV

8. a) Explain Byte-Ordering, address format and address lookup in Sockets and explain the role of sockets in IPC.

b) Write about kill and raise functions with suitable syntax and examples.

(OR)

9. a) How you duplicate output stream using FIFO? Explain.

b) What is Pipe? Write a program to create a pipe between a parent and its chid and send the data between them through pipe.

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II/IV B.Tech. DEGREE EXAMINATIONS, APRIL/MAY- 2019

Second Semester

CSE/IT

UNIX SHELL PROGRAMMING

Time: Three Hours **Maximum marks:60**

Answer Question No.1 Compulsory **6X2=12 M**

Answer ONE Question from each Unit **4X12=48 M**

1. a) Concept of positional parameters
   b) Purpose of grep utility with suitable example.
   c) 'who' and 'whoami' utilities
   d) Mention different control structures in Shell programming
   e) Brief on hard and symbolic links
   f) Purpose of alarm ()

UNIT-I

2. a) Give the architecture of UNIX and explain its features.
   b) Explain the following with suitable syntax with different options and examples
      i) head ii) sort

(OR)

3. a) "Operating systems like UNIX provide services both for programs and users". Justify this statement with suitable examples.
   b) Give a brief on mount and unmount utilities.

UNIT-II

4. a) Write a shell script which reports names and sizes of all files in a directory (directory would be supplied as an argument to the shell script) whose size is exceeding 1000 bytes. The filename should be printed in descending order of their sizes. The total number of such files should also be reported.
   b) Write a brief on shell and explain its responsibilities.

P.T.O

(OR)

5. a) Write a shell script which gets executed the moment the user logs in. It should display the message “good morning/good afternoon/good evening” depending upon the time at which the user logs in.

   b) Briefly explain Different shells available in Unix.

UNIT-III

6. a) Explain link, unlink, remove and rename functions with syntaxes.

   b) What are fflush and fseek functions? Explain with suitable syntax and example code to explore their usage.

(OR)

7. a) Write a brief or Orphan, Zombie processes.

   b) What are the differences between sleep and abort functions? Explain with suitable syntax and examples.

UNIT-IV

8. Compare the IPC functionality provided by pipes and message queues. What are the advantages and drawbacks of each? When one approach is more suitable than the other? Explain.

(OR)

9. a) Write a program for signal implementation.

   b) Explain the concept of protecting critical code and chaining interrupt handlers.