Code No: R05320503 **Set No. 1**

III B.Tech II Semester Regular Examinations, Apr/May 2008
UNIX PROGRAMMING
(Computer Science and Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. "Operating systems like UNIX provide services both for programs and users". Justify this statement with suitable examples. [16]
2. (a) Explain the different approach taken by diff command to display file differences.
   (b) Describe 'comm' command. Explain the output with -1,-2, or -3 options in 'comm' command. [8+8]
3. (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 C program to search for the word 'exam' in a given file, using Command line arguments. [8+8]
4. (a) What is a shell? What are the responsibilities of a shell?
   (b) What are the different types of shells available in unix. [8+8]
5. Write a C program to print the type of specified file (Regular, device, directory) [16]
6. (a) Write a program to illustrate the vfork function call.
   (b) Write a program for signal implementation. [8+8]
7. Write a comparative study of adversary and mandatory locking. [16]
8. Write about system call pipe . Give an example which uses pipe system call. [16]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: R05320503 **Set No. 2**

III B.Tech II Semester Regular Examinations, Apr/May 2008
UNIX PROGRAMMING
(Computer Science and Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. What is an operating system? Explain how UNIX fulfills more than that role. Discuss suitable examples. [16]
2. Discuss the various backup utilities available in UNIX. Ilustrate with suitable examples. [16]
3. (a) Write a shell script to accept a string from the terminal and use 'case' to echo a suitable message if the string does not have at least 10 characters using:
   i. case
   ii. expr
   (b) Write a shell script to display the processes in the system five times every 30 seconds using:
   i. while loop
   ii. for loop. [8+8]
4. (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) Explain about here documents with an example. [8+8]
5. (a) Write and explain about hard and symbolic links.. give an example for each.
   (b) Explain about file descriptors & i-node? [8+8]
6. Write a program which used both kill and raise functions. [16]
7. Write the differences between fcntl function and flock function. [16]
8. Explain the logic for opening or creating an IPC channel [16]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: R05320503 **Set No. 3**

III B.Tech II Semester Regular Examinations, Apr/May 2008
UNIX PROGRAMMING
(Computer Science and Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. "Operating systems like UNIX provide services both for programs and users". Justify this statement with suitable examples. [16]
2. (a) How to remove duplicate lines from a file using sort?
   (b) How to count the number of ordinary files in home directory tree?
   (c) Select lines 5 to 10 of a file in two ways. [5+5+6]
3. (a) Write a shell script for the following task.
   The word 'unix' is present in only some of the files supplied as arguments to the shell script. Your shell script should searched each of these files in turn and stop at the first file that it encounters containing the word 'unix'. This filename should be displayed on the screen.
   (b) Write a C program which receives file names as command line arguments and display those filenames in ascending order according to their sizes. [8+8]
4. (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) Explain about here documents with an example. [8+8]
5. (a) Write and explain about hard and symbolic links.. give an example for each.
   (b) Explain about file descriptors & i-node? [8+8]
6. Write the syntax of following functions. Explain each argument.
   (a) kill
   (b) raise
   (c) alarm
   (d) exit. [4+4+4+4]
7. (a) Write a C program to use a function lock_test to test for a lock.
   (b) Write about lockf function. [8+8]
8. Explain the following concepts about pipes
   (a) Pipes between two process
   (b) Pipes among three process in a shell [8+8]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: R05320503 **Set No. 4**

III B.Tech II Semester Regular Examinations, Apr/May 2008
UNIX PROGRAMMING
(Computer Science and Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Explain various commands available in UNIX for networking. Discuss suitable examples. [16]
2. Which is the command used for ordering a file? Discuss all the options available for this command. For every option explain with an example. [16]
3. (a) Write a shell script which will receive any number of filenames as arguments. The shell script should check whether every argument supplied is a file or a directory. If it is a directory it should be appropriately reported. If it is a Filename then name of the file as well as the number of lines present in it should be reported.
   (b) Write a C program to simulate 'tail' command. [8+8]
4. (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) Explain about here documents with an example. [8+8]
5. Write the syntax of following system calls.
   (a) open
   (b) creat
   (c) read
   (d) write. [16]
6. Write a program which uses abort function. [16]
7. Write about different Unix locking techniques. [16]
8. Explain the concept of IPC between two processes on a single system. Give Example. [16]

⋆ ⋆ ⋆ ⋆ ⋆