CBCS SCHEME

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18CS56

Fifth Semester B.E. Degree Examination, July/August 2022
Unix Programming

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Explain Unix architecture with neat diagram. **(09 Marks)**

b. Explain the salient features of Unix operating system. **(07 Marks)**

c. Explain the following commands : (i) date (ii) echo **(04 Marks)**

OR

2 a. Explain three categories of files in unix. **(06 Marks)**

b. What are internal and external commands in unix? Explain them with example. **(06 Marks)**

c. Explain the following commands with syntax and example,
(i) cat (ii) mv (iii) wc (iv) mkdir **(08 Marks)**

Module-2

3 a. Discuss the significance of the seven fields of ls - l command. **(09 Marks)**

b. Explain three standard file and redirection in unix. **(06 Marks)**

c. Explain grep command with example. **(05 Marks)**

OR

4 a. What are file permission? Illustrate the different ways of setting the file permission. **(10 Marks)**

b. Explain shell interpreter cycle with flowchart. **(05 Marks)**

c. Explain for and while control statements in shell script with example. **(05 Marks)**

Module-3

5 a. Explain the following API's with prototype (i) open (ii) fcntl **(10 Marks)**

b. Explain the fork and v-fork system call. How fork system call differs from v-fork? **(10 Marks)**

OR

6 a. With neat sketch, explain memory layout of C program. **(10 Marks)**

b. Explain the setjmp( ) and longjmp ( ) functions with an example C/C++ program. **(10 Marks)**

Module-4

7 a. What are pipes? Explain different ways to view a half-duplex pipe. Write a C/C++ program to send data from parent process to child process using pipes. **(10 Marks)**

b. What is FIFO? With a neat diagram, explain the client-server communication using FIFO. **(10 Marks)**

OR

8 a. Write a note on: (i) Process Accounting (ii) Process Time **(10 Marks)**

b. Explain briefly with example : (i) Message Queue (ii) Semaphore **(10 Marks)**

Module-5

9 a. What are daemon process? Mention and explain coding rules of daemon process. **(10 Marks)**

b. Explain kill( )API and alarm( )API. **(10 Marks)**

OR

10 a. Define signal. Explain Sigaction API with demonstrating program. **(10 Marks)**

b. What is error logging? With a neat block diagram, discuss the error login facility in BSD. **(10 Marks)**

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