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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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