Question Paper Code: R18A41CS01

R18

ANURAG Engineering College

(An Autonomous Institution)

IV B. Tech I Semester Regular/Supplementary Examinations, Dec-2024

LINUX PROGRAMMING

(COMPUTER SCIENCE ENGINEERING)

Time: 3 Hours **Max. Marks: 75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions

		Course Outcome	B.T Level	Marks
1.	What is the importance of dot/(.) and dot dot/(..) directories in the file system?	CO1	L1	2M
2.	Explain about I/O redirection operations in shell?	CO1	L2	3M
3.	How fcntl() system call is used in file system?	CO2	L1	2M
4.	Compare file locking with record locking?	CO2	L2	3M
5.	List any four signal functions?	CO3	L1	2M
6.	Explain how to terminate process normally or abnormally?	CO3	L2	3M
7.	Write down the advantages and disadvantages of FIFOs?	CO4	L1	2M
8.	Extend with an example describe about pipe () system call?	CO4	L2	3M
9.	How stream sockets are different form data sockets?	CO5	L1	2M
10.	Summarize the race conditions with shared memory?	CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	With the help of syntax and example explain the various process utility commands.	CO1	L3	10M
	OR			
B)	Develop a shell script to count the specified number of lines in a text file without using wc command?	CO1	L3	10M
12. A)	Make use of system calls stat( ), fstat( ) and lstat( ) in a shell script with any one example program.	CO2	L3	10M
	OR			
B)	Examine and elaborate various functions used in listing the content of a directory with syntax and sample code?	CO2	L3	10M
13. A)	Distinguish between fork() and exec() system calls with example code?	CO3	L3	10M
	OR			
B)	Inspect the mechanism for handling a signal with example code?	CO3	L3	10M
14. A)	Construct a program and explain how to transfer a large amount of data between two processes using message queues?	CO4	L3	10M
	OR			
B)	Dissect how process synchronization is achieved using semaphores with examples?	CO4	L3	10M
15. A)	Identify the system functions associated for creating and destroying a shared memory with examples?	CO5	L3	10M
	OR			
B)	Distinguish the socket system calls for connection oriented and connectionless protocol?	CO5	L3	10M