***Operating Systems:***

1. Write Client and Server programs in ‘C’ for connection oriented communication between Server and Client processes using Unix Domain sockets to perform the following: Client process sends a message to the Server Process. The Server receives the message, reverses it and sends it back to the Client. The Client will then display the message to the standard output device. (Lab-1)

2. Design, develop and execute a program in C / C++ to simulate the working of Shortest Remaining Time and Round-Robin Scheduling Algorithms. Experiment with different quantum sizes for the Round-Robin algorithm. In all cases, determine the average turn-around time. The input can be read from key board or from a file. (Lab-2)

3. Using Open MP, Design, develops and run a multi-threaded program to generate and print Fibonacci Series. One thread has to generate the numbers up to the specified limit and another thread has to print them. Ensure proper synchronization. (Lab-2)

4. C program to do the following: Using fork( ) create a child process. The child process prints its own process-id and id of its parent and then exits. The parent process waits for its child to finish (by executing the wait( )) and prints its own process-id and the id of its child process and then exits. (Lab-3)

***Compiler Design:***

5. To implement a symbol table with functions to create, insert, modify, search, and display, using C language. (Lab-4)

6. Implement a symbol table with suitable hashing. (Lab-4)

7. Implement a single pass assembler. (Lab-5)

8. Implement pass one of a two pass assembler. (Lab-5)

9. Implement pass two of a two pass assembler. (Lab-6)

10. Implement a simple text editor with features like insertion / deletion of a character, word, and sentence. (Lab-6)