



**BIT 331**

**OPERATING SYSTEMS LAB**

1. Familiarity and usage of system calls of LINUX/WINDOW NT on process management fork(), exec() etc., IPC & Synchronization-pipes, shared memory, messages, semaphores etc., File management-read, write etc.
2. Creating Threads and Manipulating under Windows-NT platform.
3. Implementing a program to get the attributes of a file/Directory on Linux using related system calls.
4. Implementing a program to get and set the environment variables using system calls.
5. Implementation of Echo server using pipes.
6. Implementation of Echo server using shared memory.
7. Implementation of Echo server using Messages.
8. Implementing Producer Consumer Problem using semaphores.
9. Implementing Producer Consumer Problem using Message passing.
10. Implementing Reader-writers problem using Semaphores.
11. Implementing Dining philosophers problem using semaphores.
12. Implementing Dinning philosophers problem using Windows-NT threads.
13. Implementation of Limited shell on Linux platform.

**Suggested Reading:**

1. W. Richard Stevens, Unix Network Programming, Prentice Hall/Pearson Education,2009.