**LP UNIT-6 Assignment Shared Memory,semaphores**

1. (a) Explain how to control a shared-memory segment.

(b) Explain how to attach and detach a shared-memory segment. [7+8]

2 Describe the functionality provided by system V IPC semaphore mechanism. Explain how it is implemented. [15]

3 How is the shared memory model implemented to achieve IPC? Explain briey. [15]

4Explain the kernel data structure for shared memory with a neat diagram. Also explain the APIs associated for creating and destroying a shared memory. [15]

5Explain the kernel data structure for semaphores with a neat diagram. Also

explain the APIs associated for semaphores. [15]

6 Explain with a program how to copy file data from server to client using shared memory. [15]

7Write a program to create and open a shared memory segment and fill it with a pattern by one process and verify the same data pattern in the shared memory segment by another process. Explain the process. [15]

8(a) Explain similarities and dissimilarities between the semaphore and shared memory IPC Mechanisms.

(b) Write and explain a program to transfer large amount of data between two unrelated processes using shared memory. [7+8]