**UNIT -5 – IPC – Assignment**

**1What is message queue explain with example?**

**2.What is FIFO explain with example?**

**3 (a) Write a program to simulate sleep and wakeup behaviors among two processes**

 **using any IPC mechanisms.**

 **(b) Illustrate mkfifo( ) system call with an example. [7+8]**

**4 Explain the following concepts about pipes:**

 **(a) Pipes between two process**

 **(b) Pipes among three process in a shell. [7+8]**

**5What are pipes ? Explain their limitations. Explain how pipes are created and used in IPC with an examples. [15]**

**6(a) Write a program to illustrate msgsnd( ) and msgrcv( ) system calls.**

 **(b) What is meant by name space? Give the name spaces of various IPC mechanisms in Unix. [7+8]**

**7 Compare the IPC functionality provided by pipes and message queues. What are the advantages and drawbacks of each? Explain briefly. [15]**

**8Write a program and explain how to transfer a large amount of data between two processes using:**

 **(a) Pipes**

 **(b) Message queues. [7+8]**

**9(a) What are the security problems associated with system V IPC mechanisms?**

 **(b) Write a program to illustrate client/server application using named pipes. [7+8]**

**10What is meant by a coprocess? Illustrate the coprocess example by taking a simple filter to convert uppercase characters to lower case letters using popen( ) and pclose( ). [15]**

**11a) Explain about the effect of O-NDELAY flag on pipes and fifos.**

 **b) Write a program to implement two-way communication using pipes.**

**12a) Why do Process Communicate?**

 **b) Elaborately discuss various forms of IPC supported by Unix.**

**13a) Explain the advantages of fifos over pipes.**

 **b) Write a C program to illustrate two way communication using fifos.**

**14a) What are the disadvantages of pipes? Write a program to implement client-server system using named pipes.**

 **b) What are the drawbacks of System V IPC mechanisms?**