 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION - **COMPUTER SC.**

SECOND SEMESTER – APRIL 2011

# CS 2811/ 2809 - OPERATING SYSTEMS

Date : 02-04-2011 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

**SECTION – A**

**ANSWER ALL THE QUESTIONS: (10X2=20)**

1. Define Multiprocessor Systems.
2. What are the different categories of System Calls in OS?
3. Differentiate I/O-Bound and CPU-Bound process.
4. What is turnaround time?
5. Define Wait and Signal Operation.
6. What is deadlock?
7. What is fragmentation?
8. What is Virtual Memory?
9. List the basic file operations.
10. What is a file descriptor?

**SECTION – B**

**ANSWER ALL THE QUESTIONS: (5X8=40)**

11 a) Explain Real-Time Systems

(OR)

b) Explain the various system services of an operating System

12 a) Explain about Inter Process Communication

(OR)

b) Explain the basic concepts of CPU Scheduling

13 a) Explain Readers-Writers problem of Synchronization

(OR)

b) Explain how will you prevent Deadlock?

14 a) Explain Paging with neat diagram

(OR)

b) Explain FIFO Page Replacement algorithm with an example

15 a) Explain any two Directory structure

(OR)

b) Explain about protection in file system

**SECTION – C**

**ANSWER ANY TWO QUESTIONS: (2X20=40)**

16 a) Explain the Structure of an operating system in detail

b) Explain any two Scheduling algorithms

17 a) Explain Semaphore in detail

b) Explain Swapping with neat diagram

18 a) Discuss any two methods of allocating disk space

b) Explain Resource-Allocation graph with a neat diagram

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