LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

FIFTH SEMESTER – November 2009

CS 5504 - OPERATING SYSTEM

Date & Time: 3/11/2009 / 9:00 - 12:00   Dept. No.   Max. : 100 Marks

SECTION A

ANSWER ALL THE QUESITONS (10 x 2 = 20

1. Define Inter Process Communication.

2. What is a shell?

3. Draw the process state transitions.

4. What is race condition?

5. What is an inverted page table?

6. Define Translation Lookaside Buffer (TLB).

7. What is a device controller?

8. Define polling.

9. List down the various Directory operations in memory management.

10. Write down file types in Unix.

SECTION B

ANSWER ALL THE QUESTIONS 5X8=40

11. a) Explain the System Calls for Process Management.
               (OR)
    b) Discuss on various operating system concepts

12. a) Explain the following scheduling algorithms
               i) First Come First Served
               ii) Shortest Job First
               (OR)
    b) Discuss on the process model.

13. a) Discuss on the significance of swapping.
               (OR)
    b) Explain about segmentation.

14. a) Explain about CD ROM.
               (OR)

b) Explain about Direct Memory Access(DMA).

15. a) Explain about various file operations
                    (OR)
   b) Define the term Directory and explain about its organization

SECTION C

ANSWER ANYTWO   **2X20=40**

16. a) Explain the Operating System Structure. (10 marks)
    b) Discuss on Deadlock Avoidance. (10 marks)

17. a) What is meant by Virtual memory? How it can it implemented?
                                              (10 marks)
    b) Explain about Graphical User Interface? (10 marks)

18. a) Discuss on the Disk Arm Scheduling Algorithm. (10 marks)

    b) Explain about the Unix file system. (10 marks)