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06EE767

**Seventh Semester B.E. Degree Examination, December 2010**  
**Operating System**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting  
at least TWO questions from each part.**

**PART – A**

- 1 a. What is OS? Discuss the advantages of multiprocessor systems. (10 Marks)  
 b. Explain the variety of compounding environments. (10 Marks)
- 2 a. What is system call? Discuss how a system call is handled, with an example. (10 Marks)  
 b. Give the state diagram of process state. Explain the contents of process control block. (10 Marks)
- 3 a. List and explain the issues to be considered with multithreaded programs. (12 Marks)  
 b. Given the CPU burst time, compute the average waiting time of RR schedule. Time quantum is 4 milliseconds. (08 Marks)

Process	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>
Burst time	24	3	3

(Milliseconds)

- 4 a. What are the semaphores? Explain their usage and implementation details. (16 Marks)  
 b. List the necessary conditions for deadlock situation. (04 Marks)

**PART – B**

- 5 Explain swapping and paging scheme, in detail. (20 Marks)
- 6 a. What is virtual memory management? (05 Marks)  
 b. Explain the demand paging method along with its block diagram. (15 Marks)
- 7 Discuss the directory structure, in detail. (20 Marks)
- 8 a. Explain the types of distributed OS. (06 Marks)  
 b. Explain the components of Linux system. (06 Marks)  
 c. Explain any one Linux process-scheduling algorithms. (08 Marks)

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