

**IV Semester B.Tech. Examination, Feb./March 2010**  
**OPERATING SYSTEMS**

Time : 3 Hours

Max. Marks : 80

**Instructions :**     *Answer **all** questions in Part A, 6 out of 8 questions in Part B and 3 out of 5 questions in Part C.*  
                              *Part A : Questions from 1 to 8 carry 1 mark and 9 to 14 carry 2 marks each.*  
                              *Part B : Each question carries 5 marks.*  
                              *Part C : Each question carries 10 marks.*

PART – A

1. What is an application program ?
2. What is a buffer ?
3. What do you mean by Resident Monitor ?
4. How do you define real time operating system ?
5. What is a thread ?
6. What do you mean by serial processing ?
7. What is SPOOLING ?
8. What is page fault ?
9. What are the advantages of multi processing ?
10. What are the basic functions of an OS ?
11. What do you mean by time-sharing ?
12. What do you mean by buffering ?
13. When a Dead Lock occurs ?
14. Why do we need swapping ?

**P.T.O.**

## PART – B

1. With the help of a block diagram explain the different states of a process.
2. Differentiate between FCFS and SJF scheduling.
3. What do you mean by Virtual Machines ?
4. Explain hard and soft real time system.
5. Consider the following process with the length of the CPU burst

Process	Burst Time
P1	24
P2	3
P3	2
P4	5

Find Average Waiting Time using FCFS and SJF methods.

6. Explain Best fit and Worst fit w. r. t. memory.
7. With respect to file system explain seek time, latency and data transfer time.
8. Compare the features of UNIX OS over MS-DOS OS.

## PART – C

1. Explain the architecture of Operating System.
  2. Explain short term and long-term schedulers.
  3. Explain the necessary conditions for Dead Lock to occur.
  4. Discuss the directory structure of a file system.
  5. Explain with block diagram how the page fault is handled in virtual memory technique.
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