

**III Semester B.C.A. Examination, Feb./March 2010**  
**OPERATING SYSTEMS**

Time: 3 Hours

Max. Marks : 80

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

PART – A

1. Define a process.
2. What is a system call?
3. Define a process.
4. How do you classify software?
5. What is a thread?
6. What do you mean by batch processing ?
7. What is SPOOLING ?
8. What is starvation ?
9. What are the advantages of multi programming ?
10. What are the basic functions of an OS ?
11. What do you mean by context switching ?
12. What do you mean by buffering ?
13. What is a Dead Lock?
14. What are internal & external fragmentations ?

**P.T.O.**

## PART – B

1. What are the different states of a process ? Explain with a block diagram.
2. Differentiate between Network and Distributed OS.
3. What do you mean by Virtual Machines ?
4. Explain shared memory technique in a process communication.
5. Consider the following process with the length of the CPU burst

| Process | Burst Time |
|---------|------------|
| P1      | 24         |
| P2      | 5          |
| P3      | 3          |

Find Average Waiting Time using FCFS and SJF methods.

6. Explain Best fit and Worst fit.
7. Explain seek time, latency and data transfer time w.r.t. a disk.
8. What are the advantages of UNIX OS over MS-DOS OS?

## PART – C

1. Explain the different types of schedulers.
  2. Explain memory hierarchy.
  3. Explain different OS services.
  4. Explain with an example paging.
  5. Discuss the different file accessing methods.
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