

**III B.Tech I Semester Supplementary Examinations, November 2005**  
**COMPUTER OPERATING SYSTEMS**  
**(Electronics & Control Engineering)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Explain operating system services.  
 (b) compare different directory systems. [8+8]
2. (a) What is system call? categorize different system calls.  
 (b) Explain the fields of process control block.  
 (c) Differentiate different schedulers. [8+4+4]
3. (a) Explain difference between internal and external fragmentation.  
 (b) Which type of fragmentation do you observe in segmentation method of memory management.  
 (c) Explain inverted paging method of memory management. [4+4+8]
4. (a) Explain banker's algorithm for deadlock detection.  
 (b) What are the criteria for a deadlock to occur. [10+6]
5. (a) Discuss different page replacement policies with examples.  
 (b) Given the following page reference string assuming 3 frames, how many page faults would occur for the LRU page replacement algorithm  
       7    0    1    2    0    3    0    4    2    3    0    3    2    1    2    0    1  
       7    0    1 [8+8]
6. Explain paging method of memory management [16]
7. Present a solution for critical section problem using n processes. Explain how it meets the requirements a critical section problem solution must satisfy. [16]
8. Write notes on:
  - (a) thrashing
  - (b) Spooling [8+8]

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