

**III B.Tech II Semester Supplementary Examinations, April/May 2005**  
**OPERATING SYSTEMS**  
**( Common to Electronics & Communication Engineering and Electronics & Instrumentation Engineering)**

**Time: 3 hours**

**Max Marks: 80**

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

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1. With the help of neat block diagram, describe the computer components with an example
2. (a) What is Swapping? Explain the need for swapping.  
(b) Explain the general structure of operating system control tables with an example.
3. Explain the state of the process Queue for the Readers / Writers problem and get the solution to the same by using message -passing
4. What are the principles of deadlock? And explain in detail the two categories of resources.
5. (a) Define Memory Management.  
(b) Explain in detail the requirements that memory management needs to satisfy
6. (a) Which type of process is generally favoured by a multi-level feed back queuing scheduler, a processor bound process or an I/O bound process ?. Briefly explain why?  
(b) Consider a variation of roundrobin that we will call priority round-robin. In priority round-robin each process has a priority in the range of 1 to 10. When a process is given a time slice the length of quantum is basic constant (say 50 ms) times the priority of the job. Compare this system with an ordinary priority system
7. Write short notes on:
  - (a) Sequential file
  - (b) Indexed file
  - (c) Indexed sequential file
  - (d) Direct file.
8. Write short notes on
  - (a) Viruses
  - (b) Worms
  - (c) Logic bomb

(d) Trap door

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