

20IT3305 : OPERATING SYSTEMS

IMPORTANT QUESTIONS ESSAY TYPE

UNIT – I

1. Operating system services. - 79
2. What is system call and explain with example. - 87
3. List and explain different types of system calls.
4. Draw and explain process state diagram. - 131
5. Discuss about different types of schedulers.(Long term, Short term and Medium term) - 136
6. Discuss IPC in detail. (need to write about shared memory and message passing mechanisms) - 146
7. Explain multithreading models with neat diagrams. - 193

UNIT II

1. CPU scheduling algorithms (Explanation, examples and problems can be given on FCFS, SJF, SRTF, Priority(preemptive and non preemptive), Round Robin)
2. Explain Multilevel queue and multilevel feedback queue scheduling algorithms. - 298
3. What is critical section? (definition, requirements for critical section problem solution) - 230
4. Provide Peterson (two process software) solution. - 231
5. What is semaphore and specify semaphore operations? - 237
6. Semaphore solution to synchronization problems - 243
 - Dining Philosophers
 - Readers Writers
 - Bounded buffer or Producer consumer

UNIT III

1. What is deadlock and what are the necessary conditions?
2. Explain briefly Deadlock Prevention. - 347
3. Explain Deadlock avoidance algorithm(Banker's) with example.
4. Explain deadlock detection and recovery.
5. What is external fragmentation and what are the methods to avoid external fragmentation?
6. Explain Paging with hardware.(with TLB also) - 391
7. Explain segmentation with hardware.
8. What is page fault? What are steps to handle the page fault?
9. Discuss page replacement algorithms with example (FIFO, Optimal, LRU)
10. What is thrashing and explain methods to overcome thrashing?

UNIT IV

1. What is file and specify file attributes, file types and file operations? - 503
2. Explain File access methods - 537
3. Discuss Directory structures with diagrams. - 542
4. Explain File allocation methods - 577
5. Explain Free space management techniques - 585
6. Disk scheduling algorithms with examples. (FCFS, SSTF, SCAN, C-SCAN, LOOK, C-LOOK) - 496
7. What is RAID and Explain RAID levels. - 508