CS 8493 Operating Systems
Important 13mark questions

Unit I

1. Describe evolution of Operating System.
2. (i) Discuss the different multiprocessor Organizations with block diagrams.
   (ii) Discuss about Direct memory access.

Unit II

1. Consider the following set of processes, with the length of the CPU-burst time in given ms

Process	Burst time	Arrival time
P1	8	0.00
P2	4	1.001
P3	9	2.001
P4	5	3.001
P5	3	4.001

4. (i) What is a process? Discuss components of process and various states of a process with the help of a process state transition diagram.
(ii) Write the difference between user thread and kernel thread.

Unit III

1. Draw the diagram of segmentation memory management scheme and explain its principle.
2. When do page fault occur? Consider the reference string:
   1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6.
   How many page faults and page fault rate occur for the FIFO, LRU and optimal replacement algorithms, Assuming one, two, three, four-page frames?

Unit IV

1. (i) Discuss about various file access methods.
   (ii) With neat sketch explain about the
      (1) Directory structure
      (2) File sharing
2. Consider the disk queue with requests for I/O to blocks on cylinders
      98, 183, 37, 122, 14, 124, 65, 67

If the disk head is start at 53, then find out the total head movement with respect to FCFS, SSTF, SCAN, C-SCAN and LOOK scheduling.

Unit V

1. (i) Explain the components of Linux system with neat sketch.
   (ii) Write the various system Administration roles in LINUX-OS.
2. (i) How to install and configuring network services in LINUX.
   (ii) Describe the benefits of virtualization in LINUX-OS.