

Question Bank (K scheme)

Name of Subject: Operating System (OSY)

Unit Test: I

Subject Code: 315319

Courses: CM5K/IF5K

Semester: V

Chapter No: 1 Operating System services and components (14 Marks)

2 Marks

1. Define real time operating system. List any four applications of it.
2. List any four services provided by OS
3. State and describe any two advantages of multiprocessor system
4. State any two command- line based and two GUI based operating systems.
5. Define system call and list its types
6. List the operating system components
7. List the types of operating system
8. Describe concept of spooling
9. List the types of multiprocessor operating system.

4 Marks

1. Enlist types of operating system. Explain multiprogramming OS in detail.
2. List components of OS. Explain process management in detail.
3. What is purpose of system call? State two system calls with their functions.
4. Explain types of system calls with examples.
5. Explain Batch operating system.
6. Explain multiprocessor operating system.
7. Differentiate between Multitasking and Multiprogramming Operating System
8. Differentiate between Real Time System and Time Sharing System.
9. List command-line based and GUI based operating system and explain any one.
10. Enlist types of services of operating system. Explain any two in details.

6 Marks

1. Explain Multiprocessor Operating System
2. Explain Distributed Operating System in detail
3. Explain system call in detail along with its implementation. Also explain any two types of system calls with examples.

Chapter No: 2 Process Management (14 Marks)

2 Marks

1. Define process.
2. Draw process state diagram.
3. List the different types of process scheduler
4. List the different scheduling queues
5. List types of IPC model
6. Describe user thread and kernel thread.
7. Enlist types of Multithreading models
8. Write syntax of following commands:
 - (i) Sleep
 - (ii) Kill
9. Write syntax of following commands:
 - (i) ps
 - (ii) sleep

4 Marks

1. Draw and explain Process Control Block
2. With neat diagram explain inter process communication model.
3. State and describe types of scheduler.
4. Explain shared memory model.
5. Differentiate between program and process
6. Explain different types of schedulers.
7. Draw and explain concept of context switch
8. Explain message passing model in details.
9. Define term thread. Explain benefits of thread.

6 Marks

1. Differentiate between process and thread (any two points) also discusses the benefits of multithreading programming.
2. Explain user level thread and Kernel level thread with its advantages and disadvantages.
3. Describe use of following command with syntax:
 1. Ps
 2. Wait
 3. Sleep
 4. Kill
 5. Nice
 6. Top

4. Describe one-to-one multithreading model with suitable diagram. Also write any two advantages of one-to-one model over many-to-one model.
5. Differentiate between short-term , long-term and medium term scheduling.

Chapter No: 3 CPU Scheduling (16 Marks)

2 Marks

1. State difference between preemptive scheduling and non-preemptive scheduling.
2. Enlist any four criteria in CPU scheduling
3. Describe I/O Burst and CPU Burst cycle with neat diagram.
4. Describe CPU bound and I/O bound Process.

4 Marks

1. State and explain any four scheduling criteria.
2. Explain First Come First Served (FCFS) scheduling algorithm with example.
3. Explain shortest remaining time next (SRTN) scheduling algorithm with example.