Unit 1 : Introduction to OS

1. What is an opearting system?

2. What are operating system services?

3. Describe the operating system operations?

4. Describe the operating system functions?

5. Explain simple batch system?

6. Explain time sharing operating system?

7 List out any four process control system calls?

8 Explain virtual machines?

9. List out any four information management system calls?

10. Describe distributed operating system?

5 Marks

1. What are the various objectives and functions of Operating systems?

2. What are the major activities of an operating systems with regard to process management?

3. Differentiate distributed systems from multiprocessor system?

4. Explain the basic instruction cycle with appropriate diagram?

5. Explain OS structure?

6. Briefly explain virtual machines?

7. Explain about multiprogramming and time sharing operating system?

8. Explain computer system architecture?

9. Explain about system calls?

10. What is os user interface?

UNIT 2 : System Structure

1) What is Semaphore? Explain the usage &implementation of Semaphore?

2) What is Monitor? What is the usage of monitor?

3) Explain about classic Problems of Synchronization.

4) Write the difference between user level thread and kernel level thread

5) What are all the state of process? Explain with neat sketch.

6) Explain Multicore Programming.

7) Explain Thread Libraries.

8) Explain Scheduling Criteria.

9) Explain about threading issues.

10) What is Implicit Threading?

11) Explain Multi-Threading models.

12) Explain fork ( ) & exec ( ) System calls.

UNIT 3 : Process Management

1. Define process?
2. What is meant by the state of the process?
3. What does PCB contain?
4. What are the 3 different types of scheduling queues?
5. Define schedulers?
6. What are the types of scheduler?
7. Define critical section?
8. Define semaphores.
9. Name dome classic problem of synchronization?
10. What is the use of cooperating processes?
11. Define race condition.
12. What are the requirements that a solution to the critical section problem must satisfy?
13. Define entry section and exit section

UNIT 4 : CPU Scheduling

1. What is a process ?explain different process states(DEC 2015)

2. Explain about process scheduling? Explain different types of schedulers?

3. Differentiate between process and threads

4. Define Thread and explain advantages of threads?

5. Explain the scheduling criteria

6. Explain FCFS scheduling algorithm with example.

7. Explain SJF scheduling algorithm with example

8. Explain Priority scheduling algorithm with example

9. Explain Round Robin scheduling algorithm with example.

10. Explain about different multithreading models

10 Marks

1. Write about the various CPU scheduling algorithms

2. Consider the following five processes, with the length of the CPU burst time given in milliseconds. Process Burst time P1 10 P2 29 P3 3 P4 7 P5 12 Consider the First come First serve (FCFS), Non Preemptive Shortest Job First(SJF), Round Robin(RR) (quantum=10ms) scheduling algorithms. Illustrate the scheduling using Gantt chart. Which algorithm will give the minimum average waiting time?

3. What is the important feature of critical section? State the Readers Writers problem and give solution using semaphore