



Paper Code : OSM:301

Paper Name : Operating System

Teaching Hours (Per Week)		Examination Scheme		
TH. (hours)	Pr. (hours)	Internal	External	Total
		Th. (marks)	Th. (marks)	100 (marks)
4		30	70	

Lectures = 68 Hours

Detailed Syllabus

UNIT I 15 Hours

Introduction to operating systems, Operating-System Structure: System Component, Operating-System Services, System Calls, System Programs, System Structure, Virtual Machines, System Design and Implementation, System generation.

UNIT II 15 Hours

Concept of a process, processes scheduling, Operation on Processes, cooperating processes, Inter process Communication, Threads Overview, Multithreading models, CPU scheduling; Basic Concept, Scheduling Criteria, Scheduling Algorithms, Multiple- Processor communication, Real time Scheduling.

UNIT III 15 Hours

Introduction to memory management, various memory management schemes like paging, segmentation, demand paging, virtual memory, page replacement algorithms, thrashing and load control, dealing with large page tables, two level paging, starring memory. .

UNIT IV 15 Hours

Process hierarchy, critical section problem, semaphore concept, study of classical co-ordination problem, Meaning of deadlocks, condition for deadlocks to occur, deadlock prevention, deadlock avoidance, deadlock detection, deadlock recovery, sequence of approach to deadlock handling, two phase locking, stagnation, introduction to concurrent processing, precedence graphs.

UNIT V 08 Hours

File concept, Access methods, Directory Structure, File System Mounting, file Sharing, Protection, File System Structure, File-System Implementation, Directory Implementation.

RECOMMENDED BOOKS:

1. "Operating System Concepts" by Silberchatz Galvin Gagne.