**Operating System: Midterm Test 1**

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| Overview of  Operating  System | Introduction: Operating System Structure and operations, Process management, Memory management, storage management, Protection and security, Distributed and special purpose Systems; System Structure: Operating system services and interface, System calls and its types, System programs, Operating System Design and implementation, OS structure, Virtual machines, OS debugging and generation, System boot. |
| Process  Management | Process concept: Process Scheduling, Operation on process and Multithreading, Process: Multithreading models and thread libraries, threading issues; Process Scheduling:  Basic concepts, Scheduling algorithms and Criteria,  Thread Scheduling and Multiple Processor Scheduling; |

Overview of Operating System:

Operating System and its need.

Operating System Structure and operations

Services provided by operating System

Types of operating System

System calls

Difference between kernel space user space

Os booting process

Operating System Design and implementation

Virtual machine

OS structure (micro, mini and layered)

What is Process? Types of process

Different types of schedulers and their difference.

PCB

Explain process scheduling with different queues.

Scheduling:

Preemptive and Non Preemptive scheduling

FCFS, SJF (SJR), Priority scheduling, Round Robin Scheduling, Multilevel Queue,

Multilevel Queue feedback.

Problems and theory based on above algorithm.

Comparison of scheduling algorithms.

Concepts of scheduling(waiting time….turnaround time etc)

Explain Multithreading with example:

Different types of thread?

Difference between user thread and kernel thread.

Multithreading issues…………….

TCB

Difference between thread and process

Etc.

Books:

Operating System Concepts, Abraham Silberschatz, Greg Gagne, Peter Baer Galvin, 8th edition Wiley.

Principles of Operating Systems: Naresh Chauhan, Oxford Higher Education