CourseCode:19CI0601 **R19**

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR
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QUESTION BANK(DESCRIPTIVE)

Subject with Code: Principles of Operating Systems (19CI0601) **Course & Branch**:B.Tech-CSIT
Year & Sem: II B.Tech & II-Sem **Regulation:**R19

UNIT–I

Operating System Overview and System Structures

1.	Demonstrate evolution of Operating System in detail?	[L3][CO1]	[10M]
2.	Explain Operating System Functions in detail?	[L2][CO2]	[10M]
3.	Define Operating System and List Operating System Structure in detail?	[L1][CO1]	[10M]
4.	Examine Operating System Operations in detail?	[L4][CO3]	[10M]
5.	Explain Computing Environments in Operating System in Detail	[L2][CO2]	[10M]
6.	Compare between Operating System Protection and Operating System Security?	[L5][CO5]	[10M]
7.	Discuss in detail various Operating System Services?	[L6][CO6]	[10M]
8.	Explain in detail User and Operating System Interface?	[L2][CO2]	[10M]
9.	Discuss in detail the various Operating System Calls?	[L6][C06]	[10M]
10.	Explain in detail Operating System programs and System boot?	[L2][CO2]	[10M]

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UNIT–2

Processes and Threads

1.	Define Process. What are the Operations on Processes?	[L1][CO1]	[10M]
2.	Explain in detail Inter process Communication?	[L2][C02]	[10M]
3.	Discuss Process Scheduling in detail?	[L6][C06]	[10M]
4.	What is multithreading? Explain the thread libraries in detail.	[L1,L2][CO2]	[10M]
5.	Examine in detail Threading issues in Operating System?	[L4][CO4]	[10M]
6.	Demonstrate Operating System Scheduling-Criteria in detail?	[L3][CO3]	[10M]
7.	Explain in detail Scheduling Algorithms in detail?	[L2][CO2]	[10M]
8.	Examine in detail Multiple-Processor Scheduling?	[L4][CO4]	[10M]
9.	Explain in detail Real-Time CPU Scheduling?	[L2][CO2]	[10M]
10.	Explain Thread Libraries in detail?	[L2][CO2]	[10M]

UNIT–3

Process Synchronization & Deadlocks

1.	Explain in detail critical-section problem?	[L2][CO2]	[10M]
2.	Demonstrate Peterson's Solution in detail?	[L3][CO3]	[10M]
3.	Define Semaphores. List Classical problems of synchronization?	[L1][CO1]	[10M]
4.	Define Monitors. List Classical problems of synchronization?	[L1][CO1]	[10M]
5.	Discuss in detail System Model?	[L6][CO6]	[10M]
6.	Explain about deadlock characterization?	[L2][CO2]	[10M]
7.	Compare various Methods of handling deadlocks?	[L5][CO5]	[10M]
8.	Examine deadlock prevention in detail?	[L4][CO4]	[10M]
9.	Explain in detail Deadlock Avoidance and Detection?	[L2][CO2]	[10M]
10.	Explain Recovery from deadlock in detail?	[L2][CO2]	[10M]

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UNIT–4

Memory management and Virtual memory

1.	Explain in detail about Management-Swapping?	[L2][CO2]	[10M]
2.	Discuss Contiguous Memory allocation in detail?	[L6][CO6]	[10M]
3.	Explain about paging in detail?	[L5][CO2]	[10M]
4.	Examine in detail about Segmentation?	[L4][CO4]	[10M]
5.	Demonstrate Segmentation with paging in detail?	[L3][CO3]	[10M]
6.	Explain about Demand paging in detail?	[L2][CO2]	[10M]
7.	Discuss about Page-replacement in detail?	[L6][CO6]	[10M]
8.	Explain about Process Creation in detail?	[L2][CO2]	[10M]
9.	Define Thrashing. List about Allocation of frames in detail?	[L1][CO1]	[10M]
10.	Discuss in detail about paging in operating system?	[L6][CO6]	[10M]

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UNIT–5

Mass-storage structure and File system Implementation

1.	Discuss in detail about disk structure and disk attachment?	[L6][CO6]	[10M]
2.	Explain about Disk scheduling and Swap-space management?	[L5][CO5]	[10M]
3.	Examine about RAID structure and stable-storage implementation?	[L4][CO4]	[10M]
4.	Define File Concept. List about File System Interface in detail?	[L1][CO1]	[10M]
5.	Explain about access methods and directory structure in detail?	[L2][CO2]	[10M]
6.	Explain in detail about file system mounting?	[L2][CO2]	[10M]
7.	Compare between file sharing and file protection?	[L5][CO5]	[10M]
8.	Explain in detail File System Structure and File System Implementation?	[L2][CO2]	[10M]
9.	Examine in detail about Directory Implementation?	[L4][CO4]	[10M]
10.	Explain in detail Allocation Methods and Free-Space management?	[L2][CO2]	[10M]

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