

SEMESTER-IV

Title of the Paper: Operating System		
Credit: 4		Theory
Course Outcome:	At the end of this course, the successful students will be able to: <ul style="list-style-type: none"> • Manage Processes. • Understand various scheduling algorithms. • Understand various memory organization techniques. Detect Deadlocks.	
Unit –I		
Definition of operating system (OS), History of OS, Different types of OS, GUI Vs CLI Interface, Kernel and Shells architecture, Simple Batch Systems, Multiprogramming Vs Multitasking operating system, Multi-programmed Batched Systems, Time-Sharing Systems, Distributed Systems and Real-Time Systems, Operating System Structures-Command Interpreter System, Operating System Services, System Calls, System Programs, Process Concept, Process control Block, process Scheduling,		
Unit –II		
CPU scheduling-Basic Concepts, Scheduling Criteria, Shortest Job First (SJF) Scheduling, First-Come First-Serve Scheduling (FCFS), Priority Scheduling, Round Robin Scheduling, Multilevel Queue Scheduling.		
Unit –III		
Memory Partitioning Basic Concepts, Logical and Physical Address Space, Swapping, Contiguous Allocation, Paging, Segmentation, Virtual Memory, Demand Paging, Paging Replacement, Fragmentation and its types, Thrashing and Demand Segmentation, File Concept, Access Methods, Directory Structure, Protection, File System Structure, Allocation methods, Free Space Management.		
Unit –IV		
Deadlock, Deadlock Characterizations, method for Handling Deadlocks, Deadlock prevention, Avoidance, Detection, recovery from Deadlock, Safe state.		

Referenced Books:

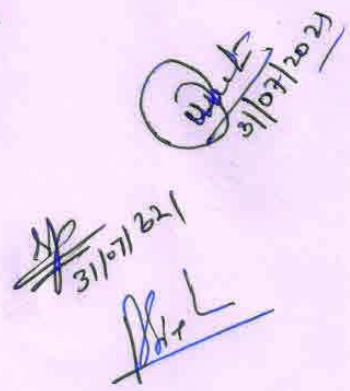
- [1] Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, "Operating System Concepts", WILEY Publication, Ninth Edition.
 [2] Andrew S. Tanenbaum, "Modern Operating Systems", Pearson Prentice Hall, Third Edition

Suggested Readings:

- [1] Dhamdhare, "Operating Systems", McGraw Hill.
 [2] Tanenbaum and Andrew S, "Modern Operating Systems", Prentice Hall India.

Weblinks:

- [1] <http://heecontent.upsdc.gov.in/>.
 [2] <https://www.cl.cam.ac.uk/teaching/1011/OpSystems/os1a-slides.pdf>



Title of the Paper: Management Information System		
Credit: 4		Theory
Course Outcome:	At the end of this course, the successful students will be able to: <ul style="list-style-type: none">• Assure information flow across the system.• Interact with different components of system.• Produce quality product.	
Unit –I		
Information concepts, classification of information, methods of data and information collection, value of information, information: A quality product, General model of a human as information processor, Knowledge, MIS: Concept, Definition, Role of the MIS, Impact of MIS, MIS and the user, Management as a control system, MIS support to the management, Management effectiveness and MIS, Organization as system.		
Unit –II		
Information system, Major areas of information system, Component of Information system, Information system resource, Fundamental roles of Information system in Business, Trends in information system, Role of e-Business in Business, Classification of Information system, Managerial challenges in information technology, success and failure with information technology.		
Unit –III		
MIS: Organization effectiveness, Concept of corporate planning, Essentiality of strategic planning, Development of the business strategies, Type of strategies, short-range planning, tools of planning, MIS: strategic business planning.		
Unit –IV		
Competitive Strategy Concepts, Strategic Uses of Information technology, Value chain and strategic Information system, Agility and its major types, Creating a virtual company, knowledge management system		

Referenced Books:

- [1] James A O'Brien, George M Marakas "Management Information System", McGrawHill, Tenth Edition.
- [2] Leonard Jessup, Joseph Valacich, "Information System TODAY", PHI Publication.

Suggested Readings:

- [1] Kenneth C. Laudon, Jane P. Laudon, "Management Information Systems", pearson.
- [2] Adamantios Koumpis, "Management Information Systems for Enterprise Applications", IGI Global.

Weblinks:

- [1] <http://heecontent.upsdc.gov.in/>.
- [2] <https://www.sctevtservices.nic.in/docs/website/pdf/140339.pdf>

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