

**PNS School Of Engg. & Tech. Marshaghai, Kendrapara**  
**LESSON PLAN**  
**Session (2024 -2025)**

<b>Discipline:</b> Computer Science & Engineering	<b>Semester-4TH</b>	<b>Name of the faculty : Madhusmita Ram</b>
<b>Subject:</b> Operating System ( Th-2)	<b>No. of Days/Week: 05</b>	<b>Start Date:04/02/2025</b> <b>End Date:17/05/2025</b>
<b>Week</b>	<b>Class Day</b>	<b>Theory Topics</b>
1ST	1st	<b>1.Introduction(Course objective and overview of OS, Components of system</b>
	2nd	Functions of operating system.
	3rd	Evolution of Operating system
	4th	Types of Operating System, Structure of operating system
	5th	<b>2.Process Management (Process concept, process state)</b>
2nd	1st	Process control block
	2nd	Interacting processes, Implementation issues of Processes.
	3rd	Process scheduling, Job scheduling
	4th	Process synchronization
	5th	Semaphore, Principle of concurrency
3rd	1st	Types of scheduling
	2nd	Inter process communication
	3rd	Revision and Question answer Discussion
	4th	<b>3.Memory Management</b>
	5th	Introduction to memory management Address binding
4th	1st	Memory allocation Techniques, address types
	2nd	Contiguous memory allocation
	3rd	Non-contiguous memory allocation
	4th	Swapping, Paging
	5th	Segmentation
5th	1st	Virtual memory using paging, Demand paging
	2nd	Page fault handling, Revision and Question answer Discussion
	3rd	<b>4.Device Management</b>
	4th	Techniques for Device Management: Dedicated
	5th	Techniques for Device Management: virtual
6th	1st	Device allocation considerations
	2nd	I/O traffic control
	3rd	I/O Schedule
	4th	I/O Device handlers.
	5th	SPOOLING.
	1st	Revision and Question answer Discussion

7th	2nd	<b>5. Dead Locks</b>
	3rd	Concept of deadlock
	4th	System Model
	5th	Deadlock characterization Necessary conditions for deadlock
8th	1st	Dead Lock Detection, Resources allocation Graph
	2nd	Methods of Deadlock handling, Deadlock avoidance, Recovery from deadlock
	3rd	Deadlock Prevention, Bankers Algorithm
	4th	Safety Algorithm, Revision and Question answer Discussion
	5th	<b>6. File Management (Introduction to File organization)</b>
9th	1st	Directory & file structure & Single-level directory, Two-level directory
	2nd	Tree-structured directory & Acyclic graph directory
	3rd	General graph directory structure
	4th	Sharing of files
	5th	File access methods, Index sequential method
10th	1st	Allocation of disk space
	2nd	File protection
	3rd	Secondary storage management
	4th	Revision and Question answer Discussion
	5th	<b>7. SYSTEM PROGRAMMING</b>
11th	1st	Concept of system programming
	2nd	Compiler
	3rd	functions of compiler
	4th	Compare compiler and interpreter
	5th	Phases of compiler, brief description of each phase (Contd..)
12th	1st	Brief description of each phase
	2nd	Symbol table Management
	3rd	Error handling routine
	4th	Chapter review
	5th	previous year questions answers discussion
<i>Madhusmita Ram</i>		<i>Biswarajin Swain</i>
SIGNATURE OF LECTURER		SIGNATURE OF H.O.D