# NM Institute Of Engineering and Technology, Bhubaneswar

## **DEPARTMENT:CSE**

LESSON PLAN: Academic Year 2023-24 (Even Semester) COURSE: DIPLOMA

**SEMESTER: 4th** 

**Subject/Code: OPERATING SYSTEM** 

Faculty Name: Bebarta Chinmayananda Das

Sl. No.	Name of the Topic to Cover	Text Book	Teaching Method	Course Progress	Remark
1	Introduction, Objectives and functions of operating system.	T1	P		
2	Evolution of Operating system	Т3	G		
3	Structure of operating system	T2	P		
4	Process concept, process control	T2	G		
5	Interacting processes, inter process messages, Implementation issues of	T2	G		
6	Processes.	Т3	G		
7	Process scheduling	T2	P		
8	Job scheduling	T1	G		
9	Process synchronization	T1	G		
10	Process synchronization (Cont)	Т3	P		
11	Semaphore	T1	G		
12	Principle of concurrency	T2	P		
13	Types of scheduling	Т3	G		
14	Types of scheduling (Cont)	T2	G		
15	Revision and Question answer Discussion	T2	G		
16	Quiz Test	T1	G		
17	Memory allocation Techniques, Contiguous memory allocation	Т3	P		
18	Non-contiguous memory allocation, Swapping	T1	G		
19	Paging	Т3	G		
20	Segmentation	T2	G		
21	Virtual memory using paging,	Т3	G		
22	Demand paging	T2	P		
23	Page fault handling	Т3	G		
24	Revision and Question answer Discussion	T2	G		
25	Techniques for Device Management: Dedicated	T1	G		
26	Techniques for Device Management: virtual	T1	G		
27	Device allocation considerations I/O traffic control	T2	P		
28	I/O Schedule	T2	P		
29	I/O Device handlers.	T1	G		
30	SPOOLING.	Т3	G		
31	Revision and Question answer Discussion	T2	G		

evision and Question answer Discussion  YSTEM PROGRAMMING: Concept of system programming and show ifference from Application Complier  ompiler, functions of compiler, Compare compiler and interpreter even phases of compiler, brief description of each phase even phases of compiler, brief description of each phase (Cont)  evision and Question answer Discussion  revious End semesters end semester Question answer Discussion  revious End semesters end semester Question answer Discussion	T2 T1 T2 T1 T2 T1 T3 T1 T1 T1 T2	P G P P G P G P G Method of Teaching G: Green Board Teaching P: Power Point Teaching		
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evision and Question answer Discussion	T1	P		
ard Disk Scheduling Algorithms	T2	-		
		P		
ard Disk Structure and its performance	T1	G		
econdary storage management (Cont)	T2	P		
econdary storage management	Т3	P		
ile protection	Т3	G		
llocation of disk space (cont)	T1	P		
llocation of disk space	T2	P		
le systems, reliability	T1	G		
ile access methods	Т3	G		
haring of files	T2	G		
ile organization, Directory & file structure	T1	G		
evision and Question answer Discussion	T2	P		
afety Algorithm	Т3	P		
ankers Algorithm	Т3	G		
ecovery from deadlock	Т3	G		
eadlock avoidance	T1	G		
Nethods of Deadlock handling	T2	P		
esources allocation Graph	Т3	P		
ead Lock Detection	Т3	G		
	esources allocation Graph  Ilethods of Deadlock handling eadlock avoidance ecovery from deadlock ankers Algorithm efety Algorithm evision and Question answer Discussion le organization, Directory & file structure naring of files le access methods le systems, reliability Illocation of disk space Illocation of disk space (cont) le protection econdary storage management	ead Lock Detection T3 esources allocation Graph T3  Idethods of Deadlock handling T2 eadlock avoidance T1 ecovery from deadlock T3 ankers Algorithm T3 efety Algorithm T3 evision and Question answer Discussion T2 le organization, Directory & file structure T1 naring of files T2 le access methods T3 le systems, reliability T1 Illocation of disk space T2 Illocation of disk space (cont) T1 le protection T3 econdary storage management T3	ead Lock Detection T3 G esources allocation Graph T3 P lethods of Deadlock handling T2 P eadlock avoidance T1 G ecovery from deadlock T3 G ankers Algorithm T3 P evision and Question answer Discussion T2 P le organization, Directory & file structure T1 G enaring of files T2 G let access methods T3 G let systems, reliability T1 G llocation of disk space T2 P llocation of disk space (cont) T1 P let protection T3 G econdary storage management T3 P	ead Lock Detection T3 G esources allocation Graph T3 P lethods of Deadlock handling T2 P eadlock avoidance T1 G eadlock Algorithm T3 G effect Algorithm T3 G effect Algorithm T3 P evision and Question answer Discussion T2 P le organization, Directory & file structure T1 G eaccess methods T3 G ele access methods T3 G ele systems, reliability T1 G ellocation of disk space T2 P ellocation of disk space (cont) T1 P ele protection T3 G econdary storage management T3 P

#### **Faculty Signature**

#### At the end of this course, students will be able to:

- Understand the concept and function of operating system. Understand notion of a process and all computation.
- To introduce the critical section problem whose solutions can be used to ensure the consistency of the shared data
- Understand the concept of deadlock, its avoidance prevention and recovery
- $\bullet \ To \ provide \ a \ detailed \ description \ of \ various \ memory \ management \ techniques. \\ \bullet \ To \ describe \ the \ benefits \ of \ a \ virtual \ memory \ system.$
- To describe the details of implementing local file systems and directory structures
- Understand the brief idea of Systems Programming

### TEXT BOOKS:

Donovan Operating System TMH	] !		
Silverschz& Galvin, Operating System PHI	]	I	
Er.Rajiv Chopra OperatingSystem S.CHAND			