**BHADRAK ENGINEERING SCHOOL & TECHNOLOGY (BEST), ASURALI, BHADRAK**

**OPERATING SYSTEM (Th- 01)**

**CHAPTER WISE DISTRIBUTION OF PERIODS & MARKS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Chapter No.** | **Topics** | **Periods as per Syllabus** | **Required period** | **Expected**  **Marks** |
| 01 | Introduction | 03 | 06 | 15 |
| 02 | Process Management | 10 | 12 | 20 |
| 03 | Memory Management | 10 | 07 | 20 |
| 04 | Device Management | 10 | 07 | 15 |
| 05 | Dead Locks | 10 | 12 | 20 |
| 06 | File Management | 10 | 08 | 20 |
| 07 | System Programming | 07 | 08 | 20 |
| **TOTAL** | | **60** | **60** | 110 |

**Sign of Lect. Sign of HOD. Sign of AIC Sign of Vice Principal**

**Theory**

|  |  |  |
| --- | --- | --- |
| **Discipline:**  Computer Science & Engg. | **Semester:**  Fourth (4th) | **Name of the Faculty:**  Er D.K Nayak |
| **Subject:**  Operating System | **No. of days/week class allotted:**  Six (6) | **Semester from Date:**  **to Date:**  **No. of Weeks:** 15 |
| **WEEK** | **CLASS DAY** | **THEORY TOPICS** |
| 1st | 1st | **Chapter No.- 1: Introduction**  Objectives and Explain functions of operating system. |
| 2nd | Continue… |
| 3rd | Evolution of Operating system. |
| 4th | Continue |
| 5th | Structure of operating system. |
| 6th | Continue |
| 2nd | 1st | ***Review class*** |
| 2nd | **Chapter No.- 02 (Process Management)**  Process concept, process control |
| 3rd | Interacting processes, inter process messages. |
| 4th | Implementation issues of Processes. |
| 5th | Process scheduling. |
|  | 6th | Job scheduling. |
| 3rd | 1st | Process synchronization, semaphore. |
| 2nd | Principle of concurrency. |
| 3rd | Types of scheduling. |
| 4th | Fcfs sheduling |
| 5th | Sjf & Ljf sheduling |
| 6th | Round Robin sheduling |
| 4th | 1st | Cont… |
| 2nd | ***Review class*** |
| 3rd | ***Monthly Test- 1*** |
| 4th | **Chapter No.- 03 (Memory Management)**Memory Allocation Technique:Contiguous memory allocation.Noncontiguous memory allocation |
| 5th | Swapping, |
| 6th | Paging, |
| 5th | 1st | Segmentation |
| 2nd | Virtual memory using paging |
| 3rd | Demand paging. |
| 4th | Page fault handling. |
| 5th | ***Review Class*** |
| 6th | **Chapter No.- 04 (Device Management)**Techniques for Device Management-Dedicated.Shared and virtual. |
| 6th | 1st | Device allocation considerations |
| 2nd | I/O traffic control |
| 3rd | I/O Schedule. |
| 4th | I/O Device handlers. |
| 5th | SPOOLING. |
|  | 6th | Continue |
| 7th | 1st | ***Review class*** |
| 2nd | ***Monthly Test- 2*** |
| 3rd | **Chapter No.- 05** (**Dead Locks**)  Concept of deadlock. |
| 4th | System Model |
| 5th | Continue |
| 6th | Resource Allocation Graph |
| 8th | 1st | Continue |
| 2nd | Deadlock Detection |
| 3rd | Method of Deadlock Handling |
| 4th | Recovery |
| 5th | Prevention |
| 6th | Bankers Algorithm |
| 9th | 1st | Continue |
|  | 2nd | Safety algorithm |
|  | 3rd | ***Review class*** |
|  | 4th | ***Monthly Test- 3*** |
| 5th | **Chapter No.- 06 (File Management)**File organization.Directory & file structure.Sharing of files. |
| 6th | File access methods. |
| 10th | 1st | File systems, reliability. |
| 2nd | Allocation of disk space |
| 3rd | Continue |
| 4th | File protection. |
| 5th | Continue |
|  | 6th | Secondary storage management. |
| 11th | 1st | ***Review class*** |
| 2nd | ***Monthly Test- 4*** |
| 3rd | **Chapter No.- 07 (SYSTEM PROGRAMMING)**Concept of system programming. |
| 4th | Show differences from Application Programming |
| 5th | Complier. |
| 6th | Functions of compiler. |
| 12th | 1st | Compare compiler and interpreter |
| 2nd | Seven phases of compiler. |
| 3rd | Brief description of each phase. |
| 4th | Continue |
| 5th | ***Review class*** |
| 6th | Review Class for Chapter No.- 01 |
| 13th | 1st | Review Class for Chapter No.- 02 |
| 2nd | Review Class for Chapter No.- 03 |
| 3rd | Review Class for Chapter No.- 03 |
| 4th | Review Class for Chapter No.- 03 |
| 5th | Review Class for Chapter No.- 04 |
| 6th | Review Class for Chapter No.- 04 |
| 14th | 1st | Review Class for Chapter No.- 04 |
| 2nd | Review Class for Chapter No.- 05 |
| 3rd | Review Class for Chapter No.- 05 |
| 4th | Review Class for Chapter No.- 06 |
| 5th | Review Class for Chapter No.- 06 |
| 6th | Review Class for Chapter No.- 07 |
| 15th | 1st | Review Class for Chapter No.- 07 |
| 2nd | Previous Year Question Answer Discussion |
| 3rd | Previous Year Question Answer Discussion |
| 4th | Previous Year Question Answer Discussion |
| 5th | Previous Year Question Answer Discussion |
|  | 6th | Previous Year Question Answer Discussion |

*Chapters covered up to IA****: 1, 2 & 3.***