**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.***