**Name of the Teacher:** Mandeep Kaur **Class:** B.Sc (Hons)-IT-I-SEM-III

**Subject:** Operating System  **Paper:** BSIT-305

**Lesson Plan**

|  |  |  |  |
| --- | --- | --- | --- |
| **S No** | **Period** | **Topics to be Covered** | **Academic Activity to be Organized** |
|  | **17-31 July 2017** | **Operating System - Functions and Structure:** Introduction to Operating System, Historical evolution of Operating System, Different services of Operating System, | Group Discussion and General Quiz |
|  | **01-31 Aug 2017** | Types of Operating Systems, Operating System Architecture, Concept of System Calls, Virtual Machine and Booting.  **Process Management:** Process Concept, Process States, Process Control Block, Process Scheduling, Context Switching, Schedulers, Operation of Processes | Power Point Presentation, Multiple Choice Question Test |
|  | **01-30 Sept 2017** | **Scheduling:** Basic concepts, Scheduling criteria, Scheduling Algorithms: FCFS, SJF, Priority, RR, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling. Multiprocessor Scheduling and Real-Time Scheduling.  **Deadlocks:** Deadlocks, Graphical representation of a Deadlock | Power Point Presentation and Solved Numerical Problems on Scheduling  Video Presentation on What is Deadlock? |
|  | **01-31 Oct 2017** | Deadlock Prerequisites, Methods for handling Deadlocks: Prevention, Avoidance, Detection and Recovery.  **Interprocess Communication and Synchronization:** Cooperating Processes, Interprocess Communication: Producer Consumer Problem, | Power Point Presentation and Algorithms discussion |
|  | **01-13 Nov 2017** | Process Synchronization: Critical Section, Hardware supported solutions, Software solutions. | Power Point Presentation,  Discussion on Critical Section Working and General Quiz |

**Topics of Assignments/ Class Tests to be given to the Students:**

|  |  |
| --- | --- |
| **Assignment 1** | What is Scheduling? Discuss Scheduling criteria. Write note on Scheduling Algorithms |
| **Assignment 2** | What is Deadlocks, Give Graphical representation of a Deadlock and Write Necessary conditions for a deadlock. |
| **Class Test** | **Process Management:** Process Concept, Process States, Process Control Block, Process Scheduling, Context Switching, Schedulers, Operation of Processes  **Scheduling:** Basic concepts, Scheduling criteria, Scheduling Algorithms: FCFS, SJF, Priority, RR, Multilevel Queue Scheduling, Multilevel Feedback Queue Scheduling. Multiprocessor Scheduling and Real-Time Scheduling. |