DEPARTMENT OF Computer Science
Dyal Singh College, University of Delhi

(ACADEMIC SESSION, 2022-23)

Course: **B.Sc. Physical Science with Computer Science (Semester III)**
Paper Code and Name: **Operating System, BHCS06** **(TH)**

FACULTY

Name of Teacher: Prof. Anita Goel
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ASSESSMENT DETAILS
Total Marks for the course is 100, comprising following components
- **Attendance – 5 marks**
- **Individual Assignment – 10 marks**
- **Test/ Presentation – 10 marks**

TEACHING PLAN

Week	Topics Covered/ Assignments/ Test/Presentations
1-2	Operating System, Definition and its purpose, Time sharing, Multiprogramming and Multiprocessing, Operating System Services, User and Operating System Interface, System Calls and its Types
3-4	Operating system Design and Structure, System Programs, System Boot, Process, Operations on Processes, Inter process communication, Shared memory.
5-6	Multithreading Models, Multicore Programming, Thread Libraries, Process Scheduling criteria, Process Scheduling Algorithms, Multiple Processor Scheduling
7-8	Process Synchronization, Critical Section Problem, Semaphores Deadlock Characterization, Methods for handling deadlocks Test
9-10	Memory Allocation Strategies-Fixed and Variable partition, Swapping, Logical and Physical Address Space, Paging, Structure of Page Table and its Variations, Shared pages, Segmentation Assignment
11-12	Virtual memory, Page Replacement Algorithms, Allocation of frames, Thrashing, Working set model
13-14	File System, File Characteristics, Access methods, Directory and Disk structure, File system structure and implementation, Directory implementation, Free space Implementation, File Allocation methods Assignment
15	Overview of Secondary Devices, Disk Scheduling Algorithms

s/d
Prof. Anita Goel