ST.JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS), VISAKHAPATNAM

   III SEMESTER     **COMPUTER SCIENCE**  Time: 2Hrs/Week

CS-Ma4-3651(2) **OPERATING SYSTEMS** **LAB**  MARKS:50

w.e.f 2024-2025 (23AK Batch) **SYLLABUS**

**Course Objectives:**

To gain knowledge about various functions of an operating system like memory management, process management, device management, etc.

**Course Outcomes:** Students after successful completion of the course will be able to:

1. Demonstrate the linux commands.
2. Design and develop process scheduling, deadlock management and file allocation techniques. [L3,L6]
3. Evaluate the performance of different memory management techniques and page replacement algorithms. [L5]

**List of Experiments:**

1. Illustrate the LINUX commands

a) pwd b) mkdir c) rmdir d) grep e) chmod f) ls g) rm h) cp

2. Write a program to calculate average waiting time and turnaround time of each process using the following CPU Scheduling algorithm for the given process schedules.

a) FCFS b) SJF c) Priority d) Round Robin

3. Simulate MVT and MFT memory management techniques

4. Write a program for Bankers Algorithm for Dead Lock Avoidance

5. Implement Bankers Algorithm Dead Lock Prevention.

6. Write a program to simulate Producer-Consumer problem.

7. Simulate all Page replacement algorithms.

1. FIFO b) LRU c) LFU d) Optimal

8. Simulate Paging Techniques of memory management

9. Simulate the following disk scheduling algorithms

a) FCFS b) SSTF c) SCAN d) CSCAN

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