Computer Science Laboratory Course-I
(System Programming)

Semester: VI **Subject Code: BSP61707** **Lectures: 60**

Objectives:
The syllabus aims in equipping students with, • Designing and implementation of System programs with minimal features to understand their complexity.

Unit 1: Line Editor	**12**
Unit 2: Simulator	**08**
Unit 3: Assembler	**12**
Unit 4: Macro processor	**12**
Unit 5:DFA driver RE TO NFA	**8**
Unit 6: Demonstration of Development Utilities . Activity Based on the development utilities for 5 marks.	**4**

***Contact hours – 04 hours**

Reference Books:

1. D.M.Dhamdhere, *Systems Programming and Operating Systems*, Second Revised Edition.[chapter 3,4]
2. Alfred V. Aho, Ravi Sethi, Jeffrey D. Ullman, *Compilers: Principles, Techniques, and Tools*
3. Leland L. Beck, System Software - *An introduction to Systems Programming*, Pearson Education [Chapter: 1] .
4. John R. Levine, Elsevier Moegan Kaufmann, *Linkers and Loaders*, [chapter 6]

Computer Science Laboratory Course-I
(Operating System)

Semester: VI **Subject Code: BSP61707** **Lectures: 60**

Objectives:
The syllabus aims in equipping students with, • Designing and implementing simulations of operating system level procedures

Unit 1: Toy shell	**08**
Unit 2: Implementing CPU Scheduling algorithms: FCFS, Shortest Job First(Preemptive &non preemptive), Priority (Preemptive &non preemptive), Round Robin	**12**
Unit 3: Deadlock detection using Banker's algorithm	**08**
Unit 4: Page Replacement Algorithms FIFO, Optimal, Least Recently Used, Most Frequently Used.	**12**
Unit 5: File Allocation methods	**08**
Unit 6: Demonstration of LEX and YACC Activity Based on the LEX and YACC for 5 marks.	**4**

***Contact hours – 04 hours**

Reference Books:

1. D.M.Dhamdhere, *Systems Programming and Operating Systems*, Second Revised Edition.[chapter 3,4]
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