ITM(SLS) BARODA UNIVERSITY
"Think Big... Think Beyond"

ITM(SLS) BARODA UNIVERSITY
SCHOOL OF COMPUTER SCIENCE, ENGINEERING AND TECHNOLOGY
ODD SEMESTER
(MST) SYLLABUS

PROGRAM: B.TECH **BRANCH: CSE/IT/AI_DS/CSN** **SEMESTER: III**

SUB. CODE: C2310C3 **SUBJECT NAME: SYSTEM SOFTWARE**

Unit # (As per university Syllabus)	Unit Name	Topics
1.	**Overview of System Software and Text Editors**	Introduction, Software, Software Hierarchy, Systems Programming Tools, LifeCycle Source Program, Levels of SystemSoftware. Text Editors: Overview of Editing Process, User Interface, Editor Structure, Text Editors - line - by - line (example), file-oriented WYSIWYG (example)
2.	**Overview of Language Processors**	Programming Languages and LanguageProcessors, Language Processing Activities, Program Execution, Fundamental of Language Processing, Symbol Tables Data Structures for Language Processing: Search Data structures, Allocation Data Structures.
3.	**Assemblers, Macros and Macro Processors**	**Assemblers**: Elements of Assembly Language Programming, Design of the Assembler, Assembler Design Criteria, Types of Assemblers, Two - Pass Assemblers, One Pass Assemblers. **Macro and Macro Processors**: Introduction, Macro Definition and Call, Macro Expansion, Nested Macro Calls, Advanced Macro Facilities, Design of a MacroPre-processor, Design of a Macro Assembler, Functions of a Macro Processor, Basic Tasks of MacroProcessor, Design Issues of Macro Processors
4.	**Overview of the Compiler**	A Simple Compiler, Difference between interpreter, assembler and compiler. Types of Compiler, Analysis of the Source Program, The Phases of a Compiler, parsing techniques,The Grouping of Phases. Frontend and backend of compiler, Code optimization Techniques

% Syllabus covered: 67%