

**SARDAR PATEL UNIVERSITY**  
**Programme & Subject: M.Sc – Information Technology (Integrated)**  
**Semester: VII**  
**Syllabus with Effect from: June-2015**

<b>Paper Code: PS07CIIT01</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: System Software</b>	

Unit	Description in Detail	Weightage (%)
I	<b>Language Processors and Compilers</b> Introduction to language processing Language processing activities: program generation, program execution, program interpretation Meaning of analysis and synthesis in language processing Introduction to compilers The analysis-synthesis model of compilation The phases of a compiler	25%
II	<b>Fundamentals of Assembly Language and Assemblers</b> Elements of assembly language programming Description of a simple assembly language Description of different types of assembly language statements : imperative statements, declaration statements, assembler directives Advantages of assembly language A simple assembly scheme : design specification of assemblers, phases and data structures Design of a two pass assembler	25%
III	<b>Editors, Linkers and Loaders</b> Editors : line editors, stream editors, screen editors, word processors, structure editors, design of editors Translated, linked and load time addresses Relocation and linking concepts : program relocation, performing relocation The process of linking The concept of loading	25%
IV	<b>System Software Tools</b> List of software tools for program development and their description Debug monitors Producing debug information Programming environments User interface tools	25%

**Basic Text & Reference Books:-**

- Dhamdhare, D M : “System programming and Operating system“, 2nd revised edition, Tata McGraw-Hill Company Limited, 2004.
- Aho A. V., Sethi R., Ullman J. D. : Compilers - Principles, Techniques and Tools, Addition-Wesley Publishing Company, 1988.

