	SYSTEM SOFTY	WARE		
[As per Choice]	Based Credit Sys	stem (CBCS) scheme]		
(Effective fr	om the academic	c year 2016 -2017)		
	SEMESTER -	- VI		
Subject Code	15IS652	IA Marks	20	
Number of Lecture Hours/Week	3	Exam Marks	80	
Total Number of Lecture Hours	40	Exam Hours	03	
	CREDITS -	03	•	
Course objectives: This course wil	ll enable students	to		
 Define System Software suc Familiarize with source file. Describe the front-end and students 	, object file and ex	xecutable file structures	s and lib	oraries
Module – 1				Teaching Hours
Introduction to System Software,	Machine Archit	ecture of SIC and SI	C/XE	08 Hours
Assemblers: Basic assembler function machine independent assemble Macroprocessors: Basic macro proprocessor features, Macro processor Text book 1: Chapter 1: (1.1-1.3. Module – 2	er features, a occessor functions r design options, 2), Chapter 2: 2.	ssembler design of , machine independent implementation examp 1-2.4, Chapter4	ptions. macro les	V
Loaders and Linkers: Basic Load	ler Functions, De	esign of an absolute loa	ader, a	08 Hours
simple Bootstrap loader, Machine-	danandant landar			
linking, algorithm and data structur	res for a linking lo	oader, Machine –indepe	endent	
loader features-automatic library se	es for a linking loearch, Loader op	oader, Machine –indepo tions, loader design op	endent ptions-	
loader features-automatic library selinkage editor, dynamic linkage, bo	es for a linking loearch, Loader op	oader, Machine –indepo tions, loader design op	endent ptions-	
loader features-automatic library solinkage editor, dynamic linkage, bo DOS linker.	es for a linking loearch, Loader op	oader, Machine –indepo tions, loader design op	endent ptions-	
loader features-automatic library solinkage editor, dynamic linkage, bo DOS linker. Text book 1 : Chapter 3	es for a linking loearch, Loader op	oader, Machine –indepo tions, loader design op	endent ptions-	
loader features-automatic library solinkage editor, dynamic linkage, bo DOS linker. Text book 1 : Chapter 3 Module – 3	res for a linking lo earch, Loader op ootstrap loaders, in	oader, Machine –indepo tions, loader design op mplementation example	endent ptions- es-MS	08 Полис
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Course outcomes: The students should be able to:

- Explain system software such as assemblers, loaders, linkers and macroprocessors
- Design and develop lexical analyzers, parsers and code generators
- Utilize lex and yacc tools for implementing different concepts of system software

Question paper pattern:

The question paper will have TEN questions.

There will be TWO questions from each module.

Each question will have questions covering all the topics under a module.

The students will have to answer FIVE full questions, selecting ONE full question from each module.

Text Books:

- 1. System Software by Leland. L. Beck, D Manjula, 3rd edition, 2012
- 2. Compilers-Principles, Techniques and Tools by Alfred V Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman. Pearson, 2nd edition, 2007

Reference Books:

- 1. Systems programming Srimanta Pal, Oxford university press, 2016
- 2. System software and operating system by D. M. Dhamdhere TMG
- 3. Compiler Design, K Muneeswaran, Oxford University Press 2013.
- 4. System programming and Compiler Design, K C Louden, Cengage Learning