SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Computer Science)
Semester: VI
Syllabus with Effect from: November/December-2013

Paper Code: US06CCSC04	Total Credit: 3
Title Of Paper: Introduction To Microprocessors & Assembly Language	

Unit	Description in detail	Weighting (%)
I	**Assembly Language Terms & Directives** Microprocessor Evolution The 8086 Microprocessor Family Overview 8086 Internal Architecture : The Execution Unit, The Bus Interface Unit Overview Of 8086 Register Set The Concept Of Assembler Assembly Language Requirements : Assembly Language, Identifier, Statements & Directives. Assembler Directives : Assume, Db, Dd, Dt, Dw, End, Endp, Ends, Extm, Label, Proc, Ptr, Public, Segment, Offset, Model, Include, Equ.	25%
II	**Assembly Language Instructions – I** Arithmetic Instructions : Add, Adc, Inc, Sub, Dec, Cmp, Mul, Imul, Div, Idiv, Neg Data Transfer Instructions : Mov, Xchg, Lea Logical Instructions : And, Or, Not Rotate And Shift Instructions : Rol, Ror, Shl, Shr	25%
III	**Assembly Language Instructions – II** Unconditional & Conditional Jump Instructions Unconditional & Conditional Loop Instructions String Instructions : Rep, Repe, Repne, Movs/Movb/Movsw, Comps/Compsb/Sompsw, Scas/Scasb/Scasw, Lods/Lodsb/Lodsw, Stos/ Stosb/Stosw Processor Control Instructions : St, Clc, Cmc, Std, Cld, Sti, Cli, Nop	25%
IV	**8086 Programming Using Assembly Level Language** The Structure Of A Typical Assembly Program. Implementation Of Control Structures : If-Then, If-Then-Else, Multiple If-Then-Else. Implementation Of Looping Structures : While-Do, Repeat-Until. Programming Based On Units 2 To 5.	25%

Basic Text & Reference Books:-

- Douglas V. Hall: Microprocessor and Interfacing programming and Hardware, Tata McGraw-Hill, 2003.
- Abel P. : IBM PC Asembly Language and Programming, 5th edition, Prentice-Hall of India Pvt. Ltd., 2001
- B. RAM "Fundamentals of Microprocessor and Microcomputers", Dhanpat Rai Publications
- Walter A. Triebel and Avtar Singh, "The 8088 and 8086 Microprocessors – Programming, Interfacing, Software, Hardware and Applications", PHI Prentic-Hall