SARDAR PATEL UNIVERSITY
Programme: B.Sc (Electronics & Communication)
Semester: V
Syllabus with effect from: June -2013

Paper Code: US05CELC02	Total Credit: 3
Title Of Paper: Introduction to 8-Bit Microprocessor	

Unit	Description in detail	Weighting (%)
I	**Microprocessor Architecture** The 8085 microprocessing unit, bus timing, demultiplexing the bus, generating the control signal, 8085 architecture, instruction classifications, instruction format, method of writing and executing simple program.	
II	**Microprocessor instruction & Programming technique** Overview of 8085 instruction set, addressing modes, and data transfer instructions, arithmetic instruction, logical instructions, and branch instructions. Programming techniques: Looping counting indexing, 16 bit arithmetic instructions, logic operations: Rotate, Compare	
III	**Counter & Stack operation** Counters And delays, hexadecimal counter, modulo-10 counter, Stack and subroutines conditional and unconditional CALL & RETURN instruction, advanced subroutine concepts.	
IV	**Code Conversion** Code conversion: BCD to binary, binary to BCD, BCD to seven segments. Binary to ASCII and ASCII to Binary, BCD addition, BCD Subtraction, Introduction to advanced Instructions and applications, multiplication	

Basic Text & Reference Books:-

- Microprocessor, Architecture, Programming and Application with 8085/8080 – Ramesh S. Gaonkar
- Fundamentals of microprocessors and microcomputers – B. Ram(Dhanpat Rai Pub.)
- Digital Computer Electronics – An Introduction to microcomputers – A.P.Malvino (Tata McGraw Hills)