SARDAR PATEL UNIVERSITY
Programme & Subject: BBA (Information Technology Management)
(3 Years)
Semester: I
Syllabus with effect from: June - 2015

Paper Code: UM01EBBI06	Total Credit: 3
Title Of Paper: Digital Computer Electronics	

Unit	Description in Detail	Weightage (%)
I	**Number Systems** Number System: Binary, Octal, Decimal & Hexadecimal and their inter-conversions - Character Representation - Data Representation: positive, negative, maximum and minimum number representation (related to 8 bit number) - Real number representation - Binary arithmetic: Binary Addition, binary subtraction using 1's and 2's compliment	25%
II	**Digital Circuits and its Simplification** Logic gates – Properties and Symbolic Representation - Truth Table (up to 3 input) - NOR and NAND gates as universal gates - De-Morgan's theorem - Simplification of logic expression using Laws of Boolean algebra - Circuit Equivalence	25%
III	**Combinational Circuits** Decoder & Encoder - Half adder & Full adder - 4-bit binary adder/subtractor - Multiplexer & Demultiplexer	25%
IV	**Sequential Building Blocks** Flip-Flop (RS, D, JK, Master-slave & & T flip-flops) - Registers & Shift registers - Counters: Synchronous and Asynchronous Designing method	25%

Basic Text & Reference Books:-

- Tanenbaum A S: Structured Computer Organization Prentice-Hall of India Pvt. Ltd.
- Malvino Brown: Digital Computer Electronics, 3rd Edition
- Malvino and Leach: Digital Principles and Applications, 4th Edition.
- Rajaraman V: Computer Fundamentals Prentice – Hall of India Pvt. Ltd.
- Sinha P K: Computer Fundamentals BPB Publi, (Second Edition)
- S.K.Basandra: Computers Today Galgotia Publi.
- Peter Norton: Introduction to Computers TMH.
- William H. Gothmann: Digital Electronics – An Introduction to Theory and Practice , 2nd Edition, PHI , 1982