SARDAR PATEL UNIVERSITY
Programme: BCA
Semester: III
Syllabus with effect from: June 2019

Paper Code : **US03SBCA21**	Total Credit: 2
Title of Paper: **Digital Computer Electronics**	

Lectures per week : 2 **Exam Duration: 2 hrs**
All units carry equal weightage.

Unit	Description in Detail	Weightage (%)
I	**Gates and Boolean Algebra** Logic gates (AND, OR, NOT, NAND, NOR, XOR, XNOR) - Properties and Symbolic Representation - Truth Table (up to 3 input) De-Morgan's theorem Simplification of logic expression using Laws of Boolean algebra Circuit Equivalence	**25%**
II	**Digital Logic Circuits-I** Karnaugh Maps Flip-Flop (RS, D Latch) Decoder & Encoder	**25%**
III	**Digital Logic Circuits-II** Multiplexer & Demultiplexer Half Adder & Full Adder Comparator Parity Bit Generator	**25%**
IV	**Digital Logic Circuits-III** 4-bit binary Adder / Subtractor Controlled Buffer Register Shift Registers Ripple Counter	**25%**

Basic Text & Reference Books:-

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