Course: SEC
Electronics Practical - SEM II
Skill based practical in Computer Organization

Semester: II	Credits: 2	Subject Code: BSSECCSE22302	Lectures: 30

Course Outcomes:
At the end of this course, the learner will be able to: ● CO1- Identify and test gates, Computer hardware and network devices ● CO2- Construct the combinational and sequential logic circuits, build and test circuits using simulation software. ● CO3- Classify different semiconductor memories; recognize the principal memory technologies from a hierarchical viewpoint with emphasis on cache memory. ● CO4- Work effectively and responsibly as a team member to perform experiments , report writing, using modern tools and techniques.

The practical course consists of 8 experiments out of which one will be activity equivalent to two experimental sessions. Activity will carry 15% marks at internal and external semester examinations. Internal marks will be calculated in continuous assessment of each practical weekly based on viva.

Unit 1: SEC sem 2 - Practical	30
● Study of Computer Hardware system ● Study of network devices and their role ● Code conversion from one base to another base ● Logic gates ● DeMorgan's theorem ● Problems based on Boolean algebra ● Binary to gray and gray to binary conversion	

Unit 2: SEC sem 2 - Practical	30
● PSpice -PN junction diode/Half Adder ● Half Adder/Full Adder ● Introduction to virtual lab-Components and gates ● Study of read and write the action of RAM ● Build and Test Diode matrix ● PPT on Microprocessors	

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Reference Books:
- Floyd T.M, *Digital Fundamentals,* tenth edition, Pearson   - Jain R.P, *Digital Electronics*, Tata McGraw Hill   - M.Morris Mano, "*Digital Design* "3rdEdition, PHI, New Delhi   - S.Salivahanan S. Arivazhagan-*Digital Circuits and Design*

Websites:
- https://www.vlab.co.in/broad-area-electronics-and-communications   - https://www.vlab.co.in/broad-area-computer-science-and-engineering   - https://cse11-iiith.vlabs.ac.in/exp/integers-arithmetic/   (https://coa-iitkgp.vlabs.ac.in/exp/karnaugh-map/)

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