Course: SEC
Skill based practical in Computer Organization

Semester: II   **Credits: 2**   **Subject Code: BSSECCSE22302**   **Lectures: 60**

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	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	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

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*

Board Of Studies	Department	Name	Signature
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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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