**7 Semester Final**

# DBMS

**9 Topic | Topic completed = 3**

* Lab 6 - Table Creation
* Lab 7 - Constraints
* Lab 8 - Displaying Data from Multiple Tables
* Lab 9 - Subquery
* Data Normalization
* **Relational Model**
* **Data Warehouse and mining**
* Decision Tree Algorithms
* Raid

**Next** = Data normalization > raid > relational > lab 8> lab 9 (idea) > decision Algo.

**Question**

* What is normalization?
* 5 keys what is it?
* What is the relational model?
* 3 main normalization points
* What is a data mining
* What is a data warehouse

# 

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# Digital Electronics

**Now Revise 12 | COMPLETED 1**

* Inverting & Non-inverting, unity, summing (Formula)
* Inverting  **(Derive)** 9MIN
* Formula **MATH**
* Voltage Subtraction **(Derive)**
* Nodal Analysis **MATH**
* Zero, positive, negative non-inverting crossing detector **(CIRCUIT)**
* Zero, positive, negative inverting crossing detector, **(CIRCUIT)**
* Instrumentation Amplifier **(Derive)**  = differential amplifier

Oscillator

* wing back to back
* Why use 555 timers, UTP, LTP
* monostable operation **(CIRCUIT)**
* astable operation **(CIRCUIT)**

# **Operating Systems**

**Chapter 5**

* Producer & Consumer Problem
* Peterson’s solution
* Binary Semaphore
* Counting Semaphore
* Solution of P-C using semaphore
* Readers and writers' Problem

**Chapter 7**

* Deadlock 4 causes
* Deadlock prevention
* RAG Algo
* Bankers Algorithms

**Chapter 8**

* Memory Management
* Virtual Memory
* Segmentation

**What?**

* What is CS?
* What is Semaphore
* 3 solutions to the CS problem
* Mutual Exclusion, Progress, Bounded Waiting.
* what are the logical address and physical addresses?
* Logical Address Space is a set of all logical addresses generated by the CPU in reference to a program. A physical Address is a set of all physical addresses mapped to the corresponding logical addresses.

# Chemistry

Thermo

* Difference between endothermic and exothermic
* **The heat of reaction** (heat evolved or absorbed),
* **solution** (a substance in a solvent infinite dilution),
* **Neutralization** (one gram equivalent weight of a base and acid in a dilute solution),
* **Combustion** (heat release when a 1-mole substance is fully burned),
* **Hess’s law** (enthalpy same whether the process is one step or several steps)
* Enthalpy of formation
* **The heat of formation 3** **MATH**

Organic chemistry

* Isomerism for
* Functional Group
* Nomenclature

Chemical Bonding

* Bond angle or shape of water, ammonia, methane
* octet rule
* Covalent bond vs Ionic bond
* What is a chemical bond
* Covalent bond
* Ionic bond
* Fajans 3 rule
* Conditions for formation of ionic bond

23 Aug

* **IUPUC naming**
* Types of isometric