Comprehensive-Tips-Important-Topics

For more notes visit

https://rtpnotes.vercel.app

Reference Video

https://youtu.be/GbkwgAMJJF8

- Comprehensive-Tips-Important-Topics
  - Tips for comprehensive
    - 1. Do more practice questions
    - 2. Analyse the syllabus
    - 3. No Negative Marking
    - 4. Use Logic
    - 5. Follow Elimination Method
    - 6. Three Run Method
  - Data Structures-Important Topics
    - 1. Data Structures (Functions and operations)
    - 2. Infix Prefix Postfix
    - 3. DFS, BFS
    - 4. Trees
    - 5. Sorting
  - OS-Important Topics
    - 1. Disk Related Question
    - 2. Paging Algorithm
    - 3. Internal Fragmentation
    - 4. Scheduling Algorithms
    - 5. System Calls
    - 6. Semaphore

    - 7. CPU utilization
    - 8. Deadlock
- COA-Important Topics
    - 1. Address bus, clock cycles, cache memory
    - 2. Numbers
    - 3. Index and offset of physical address
    - 4. Instruction size
    - 5. Pipeline Questions
- DBMS-Important-Topics
    - 1. ER Diagram
    - 2. SQL Queries
    - 3. Keys and dependencies
    - 4. Normal forms
    - 5. Schedules
    - 6. ACID Properties
    - 7. Definitions
- FLAT-Important -Topics
    - 1. Language Properties
    - 2. Grammar
    - 3. Chomsky Classification
    - 4. Minimum no of states, Minimal DFA
    - 5. Pumping Lemma
    - 6. Decidability
    - 7. Regular expression
    - 8. GNF,CNF
    - 9. Powers of Automata

Tips for comprehensive

1. Do more practice questions

- **Solve previous year question papers**

2. Analyse the syllabus

- 5 Subjects are asked in comprehensive
  - Data Structures
  - Operating Systems
  - Computer Organization And Architecture
  - Database Management Systems
  - Formal Languages And Automata Theory
- Each module has different weightage

3. No Negative Marking

4. Use Logic

- For example: Tower of hanoi is implemented with what data structure
- Tower means we can stack up things, So from logic, the answer is Stack

5. Follow Elimination Method

- Use substitution wherever possible

6. Three Run Method

- Mark the answers you know in the first round
- Mark the answers which take some time in 2nd round
- Mark the remaining answers on the 3rd round

Data Structures-Important Topics

1. Data Structures (Functions and operations)

- Stack
  - Top
  - Push
  - Pop

- Array
- Queues
    - Enqueue
    - Dequeue
- Linked List
- Hash Table
    - No of collisions problem

2. Infix Prefix Postfix

- Any one can be asked

3. DFS, BFS

- With respect to graphs question will be asked

4. Trees

- Binary Tree
- Binary Search Tree
    - **More important**

5. Sorting

- Time and space complexity

OS-Important Topics

1. Disk Related Question

- Problems
- Disk Scheduling Algorithms

2. Paging Algorithm

- **Very important**

- 2-3 questions are usually there per paper

3. Internal Fragmentation

- Memory related questions

4. Scheduling Algorithms

- Scheduling algorithms are more easier to score

5. System Calls

- Recently question was asked about **fork()**

6. Semaphore

7. CPU utilization

8. Deadlock

- Common topic
- Preventing deadlock
- Bankers algorithm

COA-Important Topics

- Slightly more difficult questions come from here
- Try to atleast get a surface level knowledge
- Numerical based questions mostly asked from this subject

1. Address bus, clock cycles, cache memory

2. Numbers

- Complement
- Codes like Gray code=

3. Index and offset of physical address

4. Instruction size

5. Pipeline Questions

DBMS-Important-Topics

1. ER Diagram

- Entity relationship
- Many to one, One to many etc

2. SQL Queries

- Find output of the SQL Query

3. Keys and dependencies

- Primary, Foreign, Super

4. Normal forms

- Questions to identify the form (BCNF,1NF,2NF,3NF)

5. Schedules

- Conflict equivalnet
- Serializable

6. ACID Properties

7. Definitions

- Study common terms

FLAT-Important -Topics

1. Language Properties

- Closure properties

2. Grammar

- Derive a grammar from a language
- Derive language from Regular expression and vice versa

3. Chomsky Classification

- Which type of language/grammar does an automata accept

4. Minimum no of states, Minimal DFA

- Common Topic

5. Pumping Lemma

6. Decidability

7. Regular expression

- **Very important**

8. GNF,CNF

- Identify whether GNF or CNF

9. Powers of Automata

- DFA, NFA who is powerful
- PDA, NPDA who is powerful