Things To study in TOC

1. Types of : (1) FA, (2) DFA, (3) PDA, (4) TM, (5) NFA, (6) ε-NFA, (7) Mealy, (8) Moore
2. How each machine accpt or rejects a string
3. Basic 2 point definition of each machine
4. Advantages & Disadvantages of each machine.
5. Conversion of NFA to DFA (Table Method only)
6. Conversion of ε-NFA to DFA (closure, diag met
7. To find ε-closure of FA.
8. Application of each machine
9. Construction of RE from RL
10. Construction of RL from RE
11. Kleen's Thorim & eg.
12. Conversion of R.E to εNFA
13. Conversion of DFA to R.E using Arden's Th.
14. Formal Def of Arden's Theorem
15. Closure Properties of Regular Languages
16. Check if given language is Regular using Pumping L
17. Formal definition of Pumping Lemma
18. Making NFA, DFA for given string/Substring.
19. Convert Mealy to Moore
20. Convert Moore to Mealy
21. Chomsky Heirarchy in detail
22. Recursive vs Recursively enumerable languages
23. Formal definition of CFG, CFL, Gramar, Ambiguous G
24. To find Leftmost, Rightmost derivation of Gramar
25. Performing Simplification of CFG
26. Formal Definition & eg for CNF, GNF
27. Reduction to ~~GNF~~ CNF
28. Closure Properties of CFL & their meaning.
29. Drawing PDA for CFG, language.

31. Difference & def for NPDA, DPDA.
32. Formal def, components, ID, NTM, DTM of TM
33. Halting Problem of TM, eg.
34. Drawing TM for any string / Grammar / Language
35. Complexity of a Turing Machine
36. Decidability, Partial, Full, undecidability, eg.
37. Halting Problem undecidability Proof
38. P vs NP, NP Hard, NP complete, definition, eg.
39. Clique Problem def, eg, Vertex cover def, eg.