CS8501 Theory of Computation
Important 13mark questions

Unit I

1. Discuss the basic approach to convert from NFA to Regular Expression. Illustrate with an example.
2. What is a Regular Expression? Write a regular expression for set of strings that consists of alternating 0's and 1's.

Unit II

1. Define Derivation tree. Explain its uses with an example.
2. Construct the CFG to generate even add odd set of palindromes over alphabets {a, b}.

Unit III

1. Explain acceptance by finite state acceptance by empty stack of a pushdown automata.
2. With an example, Explain the procedure to obtain a PDA from a given CFG.

Unit IV

1. Discuss the various techniques for Turing machine construction.
2. Describe Chomsky hierarchy of languages with example, what are the devices that accept these languages.

Unit V

1. What is Post Correspondence Problem (PCP)? Explain with the help of an example.
2. Elaborate on Primitive recursive functions with an example.