

CS8501 Theory of Computation
Important 2mark questions

Unit I

1. What is a finite automaton?
2. What are the closure properties of regular languages?
3. State the pumping Lemma for regular languages.

Unit II

1. What is meant by Context Free Grammar (CFG)?
2. Let G be the grammar with
S \rightarrow aB|bA,
A \rightarrow a|aS|bAA,
B \rightarrow b|bS|aBB,
For the string aaabbabbba find the left most derivatives.
3. What are the closure properties of context-free languages?

Unit III

1. Define a Push Down Automaton.
2. What are the conventional notations of Push Down Automata?
3. Give the steps to eliminate useless symbols.

Unit IV

1. Define a Turing Machine.
2. What is halting problem?
3. Give the configuration of Turing Machine.

Unit V

1. What is a Universal Language Lu?
2. What is Primitive recursive function.
3. Define NP-hard and NP-completeness problem.