

# 7 Lecture - CS402

## Important Mcqs

1. Which type of automaton is used to recognize finite languages?

- a. Deterministic Finite Automaton (DFA)
- b. Non-Deterministic Finite Automaton (NFA)
- c. Pushdown Automaton (PDA)
- d. Turing Machine

Answer: a

Which of the following is not a component of a DFA?

- a. Finite set of states
- b. Transition function
- c. Stack
- d. Input alphabet

Answer: c

Which of the following statements is true for a finite language?

- a. The set of strings in a finite language is infinite
- b. The set of strings in a finite language is empty
- c. The set of strings in a finite language is finite
- d. The set of strings in a finite language is uncountable

Answer: c

Can a regular expression be used to recognize a finite language?

- a. Yes
- b. No

Answer: a

Can a NFA be used to recognize a finite language?

- a. Yes
- b. No

Answer: a

Which of the following is true for a DFA?

- a. It can recognize any language
- b. It can only recognize finite languages
- c. It can only recognize infinite languages
- d. It can only recognize regular languages

Answer: d

Which of the following is true for a NFA?

- a. It can recognize any language
- b. It can only recognize finite languages
- c. It can only recognize infinite languages
- d. It can only recognize regular languages

Answer: d

Which of the following is not a step in constructing a DFA for a finite language?

- b. Define the set of states
- c. Define the transition function
- d. Define the production rules

**Answer: d**

**Which type of automaton is used to recognize context-free languages?**

- a. Deterministic Finite Automaton (DFA)
- b. Non-Deterministic Finite Automaton (NFA)
- c. Pushdown Automaton (PDA)
- d. Turing Machine

**Answer: c**

**Which of the following statements is true for a finite language?**

- a. It can be recognized by a DFA
- b. It can be recognized by a NFA
- c. It can be recognized by a PDA
- d. It can be recognized by a Turing machine

**Answer: a,b**