

1 Lecture - CS402

Important Mcqs

1. **What is automata?**

- a) A type of software application
- b) A programming language
- c) An abstract machine that performs computations automatically
- d) An operating system

Solution: c

Which field(s) has/have applications of automata theory?

- a) Computer programming
- b) Artificial intelligence
- c) Linguistics
- d) All of the above

Solution: d

What is a finite automaton?

- a) A type of software application
- b) A programming language
- c) An abstract machine that can handle infinite inputs
- d) An abstract machine that can handle finite inputs

Solution: d

What is a pushdown automaton?

- a) An abstract machine that can handle infinite inputs
- b) An abstract machine that can handle finite inputs
- c) An abstract machine that has a stack to store information
- d) An abstract machine that has a queue to store information

Solution: c

What is a Turing machine?

- a) An abstract machine that can handle finite inputs
- b) An abstract machine that can handle infinite inputs
- c) An abstract machine that has a stack to store information
- d) An abstract machine that has a queue to store information

Solution: b

Which of the following is NOT a type of automaton?

- a) Finite automaton
- b) Pushdown automaton
- c) Turing machine
- d) Object-oriented programming

Solution: d

What is the purpose of automata theory?

- a) To study the computational capabilities of machines

- b) To develop programming languages
- c) To create software applications
- d) To design operating systems

Solution: a

Which type of automaton is the most powerful?

- a) Finite automaton
- b) Pushdown automaton
- c) Turing machine
- d) All types of automata have equal computational power

Solution: c

Can a pushdown automaton handle infinite inputs?

- a) Yes
- b) No

Solution: a

Can a finite automaton recognize a language that requires counting?

- a) Yes
- b) No

Solution: b