

# 21 Lecture - CS402

## Important Mcqs

1. In a Mealy machine, what is the output function based on?

- a) Current state
- b) Input symbol
- c) Both current state and input symbol

Answer: c) Both current state and input symbol

What is the primary difference between a Mealy machine and a Moore machine?

- a) The type of output produced
- b) The number of states
- c) The input symbols used

Answer: a) The type of output produced

What is the name of the type of Finite State Machine that a Mealy machine belongs to?

- a) Mealy machine
- b) Moore machine
- c) Finite Automaton

Answer: c) Finite Automaton

How is output generated in a Mealy machine?

- a) Only based on the current state
- b) Only based on the input symbol
- c) Based on both current state and input symbol

Answer: c) Based on both current state and input symbol

What is the output of a Mealy machine used for?

- a) To recognize a language
- b) To generate a language
- c) To perform some action based on input

Answer: c) To perform some action based on input

How many types of Mealy machines are there?

- a) 1
- b) 2
- c) 3

Answer: a) 1

In a Mealy machine, can the output depend on the future input?

- a) Yes
- b) No
- c) It depends on the specific machine

Answer: b) No

What is the purpose of the state transition function in a Mealy machine?

- a) To determine the next state based on the input symbol

b) To determine the output based on the input symbol

c) To determine the output and next state based on the current state and input symbol

**Answer: c) To determine the output and next state based on the current state and input symbol**

**Which of the following is not a characteristic of a Mealy machine?**

a) Has a finite number of states

b) Can recognize or generate a language

c) The output depends only on the current state

**Answer: c) The output depends only on the current state**

**What is the computational power of a Mealy machine compared to a Turing machine?**

a) More powerful

b) Less powerful

c) Equally powerful

**Answer: b) Less powerful**