

# 8 Lecture - CS504

## Important Mcqs

In a state transition diagram, what do the arrows represent? a) States b) Transitions c) Inputs d) Outputs **Answer: b) Transitions** Which of the following describes a state in a state transition diagram? a) An action or event b) A condition or decision c) A stable situation d) A result or output **Answer: c) A stable situation** What is a self-loop transition in a state transition diagram? a) Transition between different states b) Transition between initial and final states c) Transition from one state to the same state d) Transition with multiple inputs **Answer: c) Transition from one state to the same state** What is the purpose of a guard condition in a state transition diagram? a) To determine the next state b) To indicate the starting state c) To specify the order of transitions d) To validate an input for a transition **Answer: d) To validate an input for a transition** Which type of state is used to indicate the start of a state transition diagram? a) Initial state b) Final state c) Active state d) Passive state **Answer: a) Initial state** What does a final state represent in a state transition diagram? a) The termination of the system b) A decision point c) A stable state d) An error condition **Answer: a) The termination of the system** What is a composite state in a state transition diagram? a) A state with multiple inputs b) A state with substates c) A state with no outgoing transitions d) A state with concurrent execution **Answer: b) A state with substates** Which notation is commonly used to represent actions or events in a state transition diagram? a) Rectangles b) Circles c) Arrows d) Diamonds **Answer: a) Rectangles** What is the purpose of a fork in a state transition diagram? a) To merge multiple transitions b) To create parallel paths c) To terminate the system d) To indicate a decision point **Answer: b) To create parallel paths** How are concurrent states represented in a state transition diagram? a) With dashed lines b) With solid lines c) With a dotted rectangle d) With a double circle **Answer: c) With a dotted rectangle**