

# 9 Lecture - CS402

## Important Mcqs

**What is a Generalized Transition Graph (GTG)?**

- a) A type of data structure
- b) A modeling technique used in software engineering
- c) A form of encryption algorithm
- d) A type of graph used in social network analysis

**Answer: b) A modeling technique used in software engineering**

**What is the purpose of using GTGs?**

- a) To capture the state transitions of a system
- b) To encrypt data
- c) To analyze social networks
- d) To generate random test cases

**Answer: a) To capture the state transitions of a system**

**What are the nodes in a GTG?**

- a) Transitions between states
- b) States in the system
- c) Actions taken by the system
- d) Inputs to the system

**Answer: b) States in the system**

**What are the edges in a GTG?**

- a) Transitions between states
- b) States in the system
- c) Actions taken by the system
- d) Inputs to the system

**Answer: a) Transitions between states**

**What is the difference between a GTG and a state transition diagram?**

- a) GTGs are used for software testing, while state transition diagrams are used for software design
- b) GTGs are directed graphs, while state transition diagrams are undirected
- c) GTGs can capture more complex system interactions than state transition diagrams
- d) There is no difference between a GTG and a state transition diagram

**Answer: c) GTGs can capture more complex system interactions than state transition diagrams**

**How are GTGs useful in software testing?**

- a) They can be used to generate test cases
- b) They can be used to verify the correctness of the system
- c) They can be used to analyze the behavior of the system
- d) All of the above

**Answer: d) All of the above**

**Which of the following is NOT a benefit of using GTGs?**

- a) GTGs are easy to understand and communicate
- b) GTGs can capture complex system interactions
- c) GTGs can be used for software design
- d) GTGs are not useful for testing software

**Answer: d) GTGs are not useful for testing software**

**How can GTGs be used for requirements analysis?**

- a) By capturing the desired behavior of the system

- b) By modeling the interactions between components of the system
- c) By identifying potential errors or edge cases in the system
- d) All of the above

**Answer: d) All of the above**

**Which of the following is a disadvantage of using GTGs?**

- a) GTGs are difficult to create
- b) GTGs are not useful for modeling simple systems
- c) GTGs cannot be used for software testing
- d) There are no disadvantages to using GTGs

**Answer: a) GTGs are difficult to create**

**Which of the following is an example of a system that could be modeled using a GTG?**

- a) A vending machine
- b) A simple calculator
- c) A basic website
- d) A social media platform

**Answer: a) A vending machine**