

# 2 Lecture - CS304

## Important Mcqs

1. **What is a model?**

- A. A simplified representation of a complex system
- B. A complicated representation of a simple system
- C. A physical replica of a real-world phenomenon
- D. A mathematical equation used in statistics

**Answer: A**

**What is the main purpose of a model?**

- A. To perfectly capture the complexity of reality
- B. To simulate real-world phenomena
- C. To create a physical replica of a system
- D. To replace the need for experimentation

**Answer: B**

**Which fields use models?**

- A. Science and engineering
- B. Economics and finance
- C. Computer science and technology
- D. All of the above

**Answer: D**

**What are the limitations of a model?**

- A. It can make assumptions that may affect its accuracy
- B. It can only capture the complexity of reality perfectly
- C. It is always expensive to develop
- D. It cannot be used to inform decision-making

**Answer: A**

**What is an example of a model?**

- A. A physical replica of a car
- B. A computer program simulating traffic flow
- C. A mathematical equation representing the weather
- D. All of the above

**Answer: D**

**Why are models useful in science?**

- A. They allow for the testing of hypotheses
- B. They replace the need for experimentation
- C. They can perfectly capture the complexity of reality
- D. They are always more accurate than real-world data

**Answer: A**

**What is the purpose of a mathematical model?**

- A. To simulate real-world phenomena

- B. To create a physical replica of a system
- C. To make assumptions about a system
- D. To predict outcomes and inform decision-making

**Answer: D**

**What is a disadvantage of using a physical model?**

- A. It is always cheaper to develop than other types of models
- B. It can be difficult to accurately replicate a real-world phenomenon
- C. It cannot be used to test hypotheses
- D. It is not suitable for informing decision-making

**Answer: B**

**What is the difference between a model and a theory?**

- A. A theory is a type of model
- B. A model is a type of theory
- C. A theory is a well-established explanation for a phenomenon, while a model is a simplified representation of a system
- D. A model is more accurate than a theory

**Answer: C**

**How can models be improved?**

- A. By incorporating more complex variables
- B. By reducing the number of assumptions made
- C. By including real-world data
- D. All of the above

**Answer: D**