31 Lecture - CS101

Important Mcqs

- 1. What is the probability of getting tails on a fair coin flip?
 - a) 0%
 - b) 50%
 - c) 100%
 - d) None of the above

Answer: b) 50%

- 2. What is the purpose of using a coin flip in computer science?
 - a) To generate random numbers
 - b) To ensure fairness in games and simulations
 - c) To study probability and statistics
 - d) All of the above

Answer: d) All of the above

- 3. What is the Monty Hall problem?
 - a) A problem involving flipping a coin multiple times
 - b) A problem involving choosing between three doors and a prize
 - c) A problem involving generating random numbers
 - d) None of the above

Answer: b) A problem involving choosing between three doors and a prize

- 4. How can a coin flip be used to generate random numbers?
 - a) By assigning heads to 0 and tails to 1
 - b) By flipping the coin a number of times to generate a binary string
 - c) By converting the binary string to a decimal number
 - d) All of the above

Answer: d) All of the above

- 5. What is the probability of getting three heads in a row on a fair coin flip?
 - a) 1/8 or 12.5%
 - b) 1/4 or 25%
 - c) 1/2 or 50%
 - d) 1 or 100%

Answer: a) 1/8 or 12.5%

- 6. How is a coin flip used in simulations?
 - a) To generate random numbers
 - b) To ensure fairness
 - c) To introduce random events
 - d) None of the above

Answer: c) To introduce random events

- 7. What is the probability of getting heads and tails on two consecutive coin flips?
 - a) 0%
 - b) 25%
 - c) 50%
 - d) 75%

Answer: b) 25%

- 8. How can a coin flip be used in cryptography?
 - a) To generate random numbers
 - b) To ensure security
 - c) To study probability and statistics
 - d) None of the above

Answer: a) To generate random numbers

- 9. How is the Monty Hall problem solved using coin flips?
 - a) By assigning heads to the winning door
 - b) By flipping a coin to decide which door to choose
 - c) By flipping a coin to demonstrate that switching doors increase the probability of winning
 - d) None of the above

Answer: c) By flipping a coin to demonstrate that switching doors increases the probability of winning

- 10. How can coin flips be used to study probability and statistics?
 - a) By flipping a coin multiple times and keeping track of the results
 - b) By assigning heads to 1 and tails to 0
 - c) By using a computer to simulate coin flips
 - d) None of the above

Answer: a) By flipping a coin multiple times and keeping track of the results