

# 42 Lecture - CS301

## Important Mcqs

- 1. What is collision in computer science?**
  - A. A situation where a program crashes
  - B. A situation where two or more data items end up at the same memory location
  - C. A situation where a program encounters a syntax error
  - D. A situation where a program encounters a logical error**Answer: B**
- 2. Which of the following data structures can experience collisions?**
  - A. Linked lists
  - B. Arrays
  - C. Hash tables
  - D. Stacks**Answer: C**
- 3. What is the impact of collisions on data structure performance?**
  - A. Faster access times
  - B. Slower access times
  - C. Increased data security
  - D. Decreased memory consumption**Answer: B**
- 4. What is chaining in collision handling?**
  - A. Resolving a collision by allocating new memory
  - B. Resolving a collision by reorganizing the data structure
  - C. Resolving a collision by deleting the collided data item
  - D. Resolving a collision by linking the collided data items together**Answer: D**
- 5. Which of the following is a disadvantage of chaining?**
  - A. It requires less memory
  - B. It can result in longer access times
  - C. It can result in data loss
  - D. It requires more processing power**Answer: B**
- 6. Which of the following is a disadvantage of open addressing?**
  - A. It requires more memory
  - B. It can result in longer access times
  - C. It can result in data loss
  - D. It requires more processing power**Answer: A**
- 7. What is linear probing in open addressing?**
  - A. Resolving a collision by rehashing the key

- B. Resolving a collision by allocating new memory
- C. Resolving a collision by searching sequentially for an empty slot
- D. Resolving a collision by randomly selecting a new memory location

**Answer: C**

8. **What is quadratic probing in open addressing?**

- A. Resolving a collision by rehashing the key
- B. Resolving a collision by allocating new memory
- C. Resolving a collision by searching sequentially for an empty slot
- D. Resolving a collision by incrementing the probe step by a quadratic function of the previous step

**Answer: D**

9. **Which of the following is an example of a hash function?**

- A. Sorting algorithm
- B. Linear search
- C. Bubble sort
- D. MD5

**Answer: D**

10. **What is the purpose of a hash function in collision handling?**

- A. To reduce the number of collisions
- B. To increase the number of collisions
- C. To increase the memory consumption
- D. To decrease the access time

**Answer: A**