

# 24 Lecture - CS201

## Important Mcqs

1. **What is memory allocation in C programming?**

- a) Reserving memory for the program to store data during runtime
- b) Allocating memory for the program during compile time
- c) Storing data in memory during runtime
- d) None of the above

Answer: a) Reserving memory for the program to store data during runtime

2. **Which of the following is a function used for dynamic memory allocation in C?**

- a) calloc()
- b) malloc()
- c) realloc()
- d) All of the above

Answer: d) All of the above

3. **What is the difference between malloc() and calloc() functions?**

- a) malloc() allocates a block of memory of a specified size, while calloc() initializes the memory to 0
- b) calloc() allocates a block of memory of a specified size, while malloc() initializes the memory to 0
- c) malloc() and calloc() are the same function
- d) None of the above

Answer: a) malloc() allocates a block of memory of a specified size, while calloc() initializes the memory to 0

4. **What happens if malloc() or calloc() is unable to allocate the requested memory?**

- a) The program crashes
- b) The function returns NULL
- c) The function returns a negative value
- d) None of the above

Answer: b) The function returns NULL

5. **What is a memory leak?**

- a) When memory is not deallocated after it is no longer needed
- b) When memory is allocated but never used
- c) When memory is allocated and used but not freed after it is no longer needed
- d) None of the above

Answer: a) When memory is not deallocated after it is no longer needed

6. **Which function is used to free memory allocated by malloc(), calloc(), or realloc()?**
- a) dealloc()
  - b) free()
  - c) remove()
  - d) None of the above

**Answer: b) free()**

7. **What is stack memory allocation?**
- a) Reserving memory for the program during runtime
  - b) Allocating memory for the program during compile time
  - c) Storing data in memory during runtime
  - d) None of the above

**Answer: b) Allocating memory for the program during compile time**

8. **What is heap memory allocation?**
- a) Reserving memory for the program during runtime
  - b) Allocating memory for the program during compile time
  - c) Storing data in memory during runtime
  - d) None of the above

**Answer: a) Reserving memory for the program during runtime**

9. **What is the purpose of the realloc() function in C programming?**
- a) To allocate a new block of memory
  - b) To deallocate a block of memory
  - c) To resize an existing block of memory
  - d) None of the above

**Answer: c) To resize an existing block of memory**

10. **What is the potential risk of not properly managing memory allocation in C programming?**
- a) Memory leaks
  - b) Memory fragmentation
  - c) Program crashes
  - d) All of the above

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