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