39 Lecture - CS201

Important Mcqs

1. **What is the operator used to declare a pointer in C++?**
   A) &
   B) *
   C) $
   D) %

Answer: B

2. **What is the difference between a null pointer and a void pointer in C++?**
   A) A null pointer points to nothing, while a void pointer points to any data type.
   B) A null pointer points to a memory address, while a void pointer points to a function.
   C) A null pointer is used for deallocation, while a void pointer is used for allocation.
   D) A null pointer is used for function pointers, while a void pointer is used for object pointers.

Answer: A

3. **What is the correct syntax for dynamically allocating memory for a pointer in C++?**
   A) int* p = malloc(sizeof(int));
   B) int* p = new int;
   C) int p = new int;
   D) int* p = malloc(int);

Answer: B

4. **What is a dangling pointer in C++?**
   A) A pointer that points to a valid memory address.
   B) A pointer that points to a deallocated memory address.
   C) A pointer that points to a null memory address.
   D) A pointer that points to a function.

Answer: B

5. **What is the purpose of the const keyword when working with pointers in C++?**
   A) To declare a constant pointer variable.
   B) To declare a pointer to a constant variable.
   C) To declare a constant memory address.
   D) To declare a constant value pointed to by a pointer.

Answer: B

6. **What is the difference between a reference and a pointer in C++?**
   A) A reference is an alias for a variable, while a pointer is a separate variable that stores a memory address.

B) A reference is a separate variable that stores a memory address, while a pointer is an alias for a variable.
C) A reference and a pointer are the same thing in C++.
D) A reference is used for dynamic memory allocation, while a pointer is used for static memory allocation.

Answer: A

7. **What is the operator used to access the value pointed to by a pointer in C++?**
   A) .
   B) ->
   C) &
   D) *

Answer: D

8. **What is the correct syntax for deleting a dynamically allocated pointer in C++?**
   A) delete p;
   B) delete *p;
   C) delete &p;
   D) free(p);

Answer: A

9. **What is a memory leak in C++?**
   A) A pointer that points to a deallocated memory address.
   B) A pointer that points to a null memory address.
   C) A pointer that points to a valid memory address.
   D) A failure to deallocate dynamically allocated memory, causing the program to use up all available memory.

Answer: D

10. **What is a smart pointer in C++?**
    A) A pointer that automatically deallocates memory when it goes out of scope.
    B) A pointer that automatically allocates memory when it is assigned a value.
    C) A pointer that automatically sets the value pointed to by the pointer to null.
    D) A pointer that automatically dereferences itself when used in code.

Answer: A