16 Lecture - CS201

Important Mcqs

1. What is the value of the pointer variable ptr after the following code is executed?

arduino Copy code int "ptr" int x = 5; ptr = &x; a) 0 b) 5 c) Memory address of x d) Error Answer: c) Memory address of x

- Which operator is used to access the value at a memory location pointed to by a pointer?
 a) &
 - b) *
 - c) \$
 - d) #

Answer: b) *

- 3. What is the purpose of a null pointer?
 - a) It points to the memory location containing 0.
 - b) It points to the memory location containing NULL.
 - c) It is a pointer that has not been initialized.
 - d) It is a pointer that points to the beginning of an array.

Answer: b) It points to the memory location containing NULL.

4. What is the output of the following code?

perl
Copy code
<pre>int arr[3] = {1, 2, 3}; int *ptr = &arr[1]; printf("%d", *ptr);</pre>
a) 1 b) 2
c) 3 d) Error
Answer: b) 2

5. What is the output of the following code?

perl
Copy code
<pre>int arr[3] = {1, 2, 3}; int *ptr = arr; printf("%d", *(ptr + 2));</pre>
a) 1 b) 2 c) 3 d) Error
Answer: c) 3

6. What is the difference between a pointer and a reference?

a) A pointer is a variable that holds the memory address of another variable, while a reference is an alias for another variable.

b) A pointer is a reference to another variable, while a reference is a variable that holds the memory address of another variable.

c) There is no difference between a pointer and a reference.

d) A pointer can be used with any data type, while a reference is limited to specific data types.

Answer: a) A pointer is a variable that holds the memory address of another variable, while a reference is an alias for another variable.

- 7. What is the purpose of the & operator in pointer operations?
 - a) It returns the memory address of a variable.
 - b) It dereferences a pointer variable.
 - c) It assigns a value to a pointer variable.
 - d) It tests a pointer for a null value.

Answer: a) It returns the memory address of a variable.

8. What is a dangling pointer?

- a) A pointer that points to a memory location that has been freed.
- b) A pointer that points to a null value.
- c) A pointer that has been assigned an incorrect memory address.
- d) A pointer that points to the beginning of an array.

Answer: a) A pointer that points to a memory location that has been freed.

9. What is the output of the following code?

]	perl
	Copy code
	<pre>int arr[3] = {1, 2, 3}; int *ptr = arr; *ptr = 4; printf("%d", arr[0]);</pre>
8	a) 1

b) 2

c) 3

d) 4

Answer: d) 4

- 10. What is the purpose of pointer arithmetic?
 - a) To perform arithmetic operations on the memory locations pointed to by pointers.b) To perform arithmetic operations on the values