

# 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

2. 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

```
int arr[3] = {1, 2, 3}; int *ptr = &arr[1]; printf("%d", *ptr);
```

- a) 1
- b) 2
- c) 3
- d) Error

Answer: b) 2

5. What is the output of the following code?

perl

Copy code

```
int arr[3] = {1, 2, 3}; int *ptr = arr; printf "%d", *(ptr + 2);
```

- 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

```
int arr[3] = {1, 2, 3}; int *ptr = arr; *ptr = 4; printf("%d", arr[0]);
```

- 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