

### Question 1

3 / 3 pts

Match the word with the definition.

Stack link-list variable referring to a location in the stack.

Frame pointer. ▼

Dynamic memory allocation.

Heap division of memory. ▼

A variable referring to a location in the code.

Stack pointer. ▼

Where constant variables and machine instructions are stored.

Code division of memory. ▼

Where local variables are stored.

Stack division of memory. ▼

### Question 2

1 / 1 pts

What is the output of the following code:

```
{  
int array[] = {4, 7, 2, 3, 9, 1, 8};  
cout << *(array + 4);  
}
```

Hint: the output will be a single number.

9

**Question 3****1 / 1 pts**

Which of the following will declare a pointer to a function where there is an integer return type and a float parameter?

- ☒ `int (*variable)(float value);`
- ☐ `float(*variable)(int value);`
- ☐ `int *variable(float value);`
- ☐ `float *variable(int value);`
- ☐ `(int *)variable(float value);`
- ☐ `(float *)variable(int value);`
- ☐ `float variable(int value);`
- ☐ `int variable(float value);`

**Question 4****1 / 1 pts**

Which of the following best describes a v-table?

- ☒ A collection of function pointers in a class definition making polymorphism possible
- ☐ A collection of variable pointers making inheritance possible
- ☐ A collection of class pointers defining all the member variables and member functions in a class
- ☐ Everything accessible through the "this" pointer in C++

**Question 5****1 / 1 pts**

What is the output of the following code:

```
{  
  char value = 127;  
  ++value;  
  cout << (int)value;  
}
```

-128

**Question 6****1 / 1 pts**

What type of data is stored on the call stack? Select all that apply.

- ☒ Local Variables
- ☒ Parameters
- ☒ Return Address
- ☒ Frame Pointer
- ☐ Executable Code
- ☐ Constants
- ☐ Dynamically Allocated Memory

**Question 7****1 / 1 pts**

Which of the following best describes the MCB?

- ☒ A node in a linked list connecting blocks of memory
- ☐ An array of pointers to blocks of memory
- ☐ One layer in the memory management scheme serving to interface between the operating system memory management and the application's memory needs
- ☐ A structure specifying whether a given block of memory is free or currently being utilized