

1. Which of the following concepts is mentioned in the Rule of the Big Three?

- A. header file
- B. **[Correct Answer]** **[Your Answer]** destructor
- C. encapsulation
- D. compilation
- E. default constructor
- F. None of these concepts is mentioned in the rule.

2. Which of the following is a correct way to initialize the variable named NCC1701 to be a dynamic array of starShip pointers with size size?

- A. starShip \* NCC1701[size];
- B. None of the other answers are correct initializations for NCC1701.
- C. **[Correct Answer]** **[Your Answer]** NCC1701 = new starShip \*[size];
- D. for (int i = 0; i < size; i++) NCC1701[i] = new starShip \*;
- E. starShip \* [size] NCC1701;
- F. NCC1701 = new starShip[size];

3. Consider this simple example.

```
int * p;  
int i;  
i = 37;  
*p = i;  
*p = 99;  
cout << i << endl;
```

What is the result of executing these statements, assuming that iostream is included?

- A. This code has a memory leak.
- B. **[Your Answer]** 37 is sent to standard out.
- C. **[Correct Answer]** This code results in undefined runtime behavior.
- D. This code does not compile.
- E. 99 is sent to standard out.
- F. None of the other options describes the behavior of this code.

4. Consider this simple example.

```
class textBlock{  
public:  
    textBlock(const string & s):text(s) {}  
    char & operator() (int position)  
    { return text[position]; }  
private:  
    string text;  
};  
int main() {  
    textBlock t("code monkey");  
    for (int i = 0; i < 11; i++)  
        // Your answer goes here!  
  
    return 0;  
}
```

Which of the following statements complete the code above so that the output is code monkey?

- A. cout << text[i];
- B. **[Correct Answer]** **[Your Answer]** cout << t(i);
- C. More than one of the other answers produces the correct output.
- D. cout << t[i];
- E. cout << t;

5. Consider this simple example.

```
int * a;  
int * b;  
b = new int(5);  
a = b;  
*a = 9;  
cout << *b << endl;  
delete b;  
a = NULL;  
b = NULL;
```

What is the result of executing these statements if you assume the standard `iostream` library has been included?

- A. The memory address of `b` is sent to standard out.
- B. This code results in undefined runtime behavior.
- C. **[Correct Answer]** **[Your Answer]** 9 is sent to standard out and no memory is leaked.
- D. None of the other options describes the behavior of this code.
- E. 5 is sent to standard out and no memory is leaked.
- F. This code has a memory leak.