1. (14 points) A C++ program is provided, with several lines of code ending in comments indicating a possible compilation error in each of those lines. Your task is to cross out every comment that does not describe an actual compilation error for its corresponding line of code. For example, if the following two lines are part of the program:

```cpp
int valueToBeEnteredByUser; // Unacceptably long variable name
cout >> "Enter value: "; // Input operator used instead of output operator
```

then the first line’s comment should not be crossed out, while the second line’s comment should be crossed out.

2. (4 points) Several C++ statements are provided, with all variables assumed to have been declared as integers. Your task is to check each of the statements that is syntactically correct in C++. For example, the first statement below should not be checked, while the second statement should be checked.

- count = a * b / c - d + e - f * g - h / i;
- while (x => 0) x--;

3. (4 points) Several assignment statements involving an integer variable p are provided. Your task is to specify what the value of p would be after the execution of the statement. For example, the following statement would yield a p value of 95.

```
p = 75 - 60 + 10 * 8;
```

4. (3 points) Several integer variables are assumed to have been assigned specific values. Your task is to specify the output after the execution of several statements. For example, assuming that x and y have both been assigned values of 24, the execution of the following statement produces TRIG as its output.

```
if ((x > y) || (y > x))
    cout << "ALGEBRA";
else
    cout << "TRIG";
```

5. (10 points) In a provided grid, your task is to specify the exact output of a provided program. For instance, the output of the following program would be placed in the grid as illustrated.

```cpp
#include <iostream>
using namespace std;
void main()
{
    const int MINMONTH = 8;
    const int MAXMONTH = 12;
    int currentMonth;
    int index = 1;

    currentMonth = MINMONTH;
    while (currentMonth <= MAXMONTH)
    {
        cout << "Month #" << index << ": " << currentMonth << endl;
        currentMonth++;
        index++;
    }

    return;
}
```

```
Month    # 1  :  8
Month    # 2  :  9
Month    # 3  : 10
Month    # 4  : 11
Month    # 5  : 12
Press any key to continue
```
6. (7 points) Several hardware devices will be listed. Your task is to match several hardware descriptions with the corresponding device from the list.

7. (6 points) A specific C++ statement is provided. Your task is to specify which part of the compile/build process (lexical analysis, parsing, code generation, linking, or loading) is associated with each of a list of activities.

8. (10 points) Your task is to fill in the body of a program so that the program will perform a specific job. A sample I/O display is provided to illustrate what the user would see when executing the program.

9. (10 points) In a provided grid, your task is to specify the exact output of a provided program.

10. (10 points) Your task is to fill in the body of a program so that the program will perform a specific job. A sample I/O display is provided to illustrate what the user would see when executing the program.

11. (10 points) A large if-else block is provided. Your task is to write a switch statement (containing no if statements) that would yield exactly the same results as the if-else block.

12. A complete C++ program is provided, involving external files.
   a) (6 points) Your task is to specify what the program will output if it uses a specific text file for input.
   b) (6 points) Your task is to specify a one-sentence explanatory comment that should be placed at the top of the program, clearly indicating the specific operation that the program is designed to do. For example, an appropriate comment for our last programming assignment would be:

      // This program repeatedly queries the user for integer
      // values that are then completely factored into primes.