Section 2.2 First Program in C++: Printing a Line of Text

2.2 Q1: End-of-line comments that should be ignored by the compiler are denoted using:
   a. Two forward slashes (//).
   b. Three forward slashes (///).
   c. A slash and a star (/\*).
   d. A slash and two stars (/**).
ANS: a. Two forward slashes (//).

2.2 Q2: Which of the following does not cause a syntax error to be reported by the C++ compiler?
   a. Mismatched {}.
   b. Missing */ in a comment.
   c. Missing ; at the end of a statement.
   d. Extra blank lines.
ANS: d. Extra blank lines.

2.2 Q3: Which of the following is not a syntax error?
   a. std::cout << 'Hello world! ';
   b. std::cout << "Hello world! ";
   c. std::cout << "Hello world! ";
   d. std::cout << Hello world!;
ANS: a. std::cout << "Hello world! ";

2.2 Q4: The escape sequence for a newline is:
   a. \n
ANS: a. \n
2.2 Q5: Which of the following statements would display the phrase C++ is fun?
   a. std::cout << "Thisis fun\rC++ ";
   b. std::cout << '++ is fun';
   c. std::cout << "C++ is fun\""
   d. std::cout << C++ is fun;
ANS: a. std::cout << "Thisis fun\rC++ ";

Section 2.3 Modifying Our First C++ Program

2.3 Q1: Which of the following is not a valid C++ identifier?
   a. my_value
   b. _AAA1
   c. width
   d. m_x
ANS: a. my_value (Identifiers may not contain blanks)

2.3 Q2: Which is the output of the following statements?
   std::cout << "Hello ";
   std::cout << "World";
   a. Hello World
b. World Hello
c. Hello
   World
d. World
   Hello
ANS: a. Hello World

2.3 Q3: Which of the following is the escape character?
   a. *
   b. \
   c. \n
ANS: b. \\

2.3 Q4: Which of the following code segments prints a single line containing hello there with the words separated by a single space?
   a. std::cout << "hello ";
      std::cout << " there";
   b. std::cout << "hello" ,  " there";
   c. std::cout << "hello";
      std::cout << " there";
   d. std::cout << "hello"
      std::cout << " there";
ANS: d. std::cout << "hello"
      std::cout << " there";

Section 2.4 Another C++ Program: Adding Integers

2.4 Q1: Which of the following is a variable declaration statement?
   a. int total;
   b. #include <iostream>
   c. int main()
   d. // first string entered by user
ANS: a. int total;

2.4 Q2: The ________ object enables a program to read data from the user.
   a. std::cout.
   b. std::cin.
   c. std::cread.
   d. std::cget.
ANS: b. std::cin.

2.4 Q3: The assignment operator ________ assigns the value of the expression on its right to the variable on its left.
   a. <-
   b. ->
   c. =
   d. #
ANS: c. =.

2.4 Q4: The std::endl stream manipulator_______.
   a. inputs a newline.
   b. flushes the output buffer.
   c. outputs a newline and flushes the output buffer.
   d. terminates the program.
ANS: c. outputs a newline and flushes the output buffer.
Section 2.5 Memory Concepts

2.5 Q1: Which of the following statements does not overwrite a preexisting value stored in a memory location?
   a. int a;
   b. number = 12;
   c. y = y + 2;
   d. width = length;
ANS: a. int a;

2.5 Q2: Which of the following statements could potentially change the value of number2?
   a. std::cin >> number2;
   b. sum = number1 + number2;
   c. number1 = number2;
   d. std::cout << number2;
ANS: a. std::cin >> number2;

Section 2.6 Arithmetic

2.6 Q1: What is the value of result after the following C++ statements execute?
   int a, b, c, d, result;
   a = 4;
   b = 12;
   c = 37;
   d = 51;
   result = d % a * c + a % b + a;
   a. 119
   b. 51
   c. 127
   d. 59
ANS: a. 119.

2.6 Q2: In what order would the following operators be evaluated

   -, *, /, +, %

Assume that if two operations have the same precedence, the one listed first will be evaluated first.
   a. +, -, /, *, %
   b. -, +, %, *, /
   c. -, *, %, +, /
   d. *, /, %, -, +
ANS: d. *, /, %, -, +

2.6 Q3: Which of the following is not an arithmetic operator?
   a. +
   b. -
   c. =
   d. %
ANS: c. =

Section 2.7 Decision Making: Equality and Relational Operators

2.7 Q1: What will be the output after the following C++ statements have been executed?
```cpp
int a, b, c, d;
a = 4;
b = 12;
c = 37;
d = 51;

if ( a < b )
    cout << "a < b" << endl;

if ( a > b )
    cout << "a > b" << endl;

if ( d <= c )
    cout << "d <= c" << endl;

if ( c != d )
    cout << "c != d" << endl;
```

a. a < b
   c != d
   b. a < b
      d <= c
      c != d
c. a > b
   c != d
d. a < b
   c < d
   a != b
ANS: a. a < b
     c != d

2.7 Q2: Which of the following is a compilation error?
   a. Neglecting to declare a local variable in a function before it is used.
   b. Using a triple equals sign instead of a double equals sign in the condition of an if statement.
   c. Omitting the left and right parentheses for the condition of an if statement.
   d. All of the above.
ANS: d. All of the above.

2.7 Q3: Each of the following is a relational or equality operator except:
   a. <=
   b. !=
   c. ==
   d. >
ANS: b. !=