

1.2) Describe the three kinds of comments used in Java.

The three kinds of comments used in Java are the one declaration per line using "//", there are multi-line comments that starts with the syntax "/* " and ends with "*/", and the last kind of comment is Documentation comments which is utilized by large code programmers which has the syntax like:

```
/** sudocode here
    * and here
    * and here
 */
```

1.5) Explain the difference between prefix and postfix increment operators.

The difference between them is when the value is incremented, so for prefix, the variable is incremented first and then the expression is evaluated using the new value. While postfix increment operator is when the expression is evaluated first using the original value then the variable is incremented.

1.9) What is method overloading?

Method Overloading is when a class has more than one method of the same name and their parameters are different.

1.11) Let b have the value of 5 and c have the value of 8. What is the value of a, b, and c after each line of the following program fragment?

```
a = b++ + c++; a = 13, b = 6, c = 9
a = b++ + ++c; a = 16, b = 7, c = 10
a = ++b + c++; a = 18, b = 8, c = 11
a = ++b + ++c; a = 21, b = 9, c = 12
```

1.13) For the following, give an example in which the for loop on the left is not equivalent to the while loop on the right.

```
for(init; test; update)
{
    statements
}
```

```
init;
while(test)
{
    statements
    update;
}
```