CSS

1. Explain the difference between px, em and rem units.

   “PX” is considered an absolute unit, not scalable. Namely, the “px” unit is a fixed unit, and it is not suitable for responsive web design. However, “em” and “rem” are relative units to elements. Therefore, they are scalable for responsive web design. Additionally, “em” is relative to the parent element. “rem” is comparable to the root element. The root elements mean HTML tag.

2. What will the following SCSS example look like when compiled into CSS?

```
.class-a {
  .class-b {
    z-index:1;
  }
  div {
    margin-left: 20px;
  }
}
```

```
.class-a .class-b {
    z-index: 1;
}
 .class-a div {
    margin-left: 20px;
}
```

3. Explain the difference between visibility:hidden and display:none

   Display: none will hide elements and “not show HTML tag” on a page. However, visibility: hidden will make objects disappeared, but the “HTML tag” still leaves on a page.

4. What would you need to do to absolutely position an element within a container?

I will set up the relative position of a container first. Secondly, I define children's elements of display, position, width, and height. And, I will define the distances of an element between top/bottom and left/right.

JavaScript

1. Explain the difference between == and ===.

   "==" will convert a value before comparing two objects. However, "===" will not convert a value while comparing two objects. Also, "===" is stricter than "==."

   For example,

```
0 == false              // true
0 === false             // false
null == undefined       // true
null === undefined      // false
```

2. What does 1+3+7+"12" evaluate to?

   1, 3, 7 are numbers. "12" is a string. And numbers can not add up a string. Thus, 11 concatenate "12".

```
1112
```

3. Name 2 different types of loop statements.

   for, while, do while, for...in, for...of

4. Name 2 different types of conditional statements.

   If...else, if, switch

5. Write a simple function that returns the string Hello World.

```
function doSomething( ) {
        return "Hello World!";
}
```

Git/Command Line

1. What sequence of git commands would you use to:
   - Check for changed files
   - Stage all changed files
   - Commit staged files with a message
   - Push all changes to remote branch

git diff
git add .
Git commit –m 'message…'
Git push

2. What commands would you use to switch directories, then list the contents of the new directory when using the command line?

Git checkout branch.
Git show