Full Name _____

Section & Subsection _____

Roll # _____

12 points.

1. (2 points) The following code is exectued after the person gives instruction to delete a file. The program should get a confirmation of "yes" to delete the file. The person may type "no" to cancel the deletion. If the person types something else, then they should be given two additional chances. If all 3 times, the person mistypes, then the program should cancel the deletion. List the mistakes in the following and write a correct version.

```
tries = 1
while tries < 3:
    answer = input()
    if answer == "yes":
        print("Deleting.")
    if answer == "no":
        break
    else:
        tries = tries + 1
        continue
```

2. (1 point) Reason whether or not "Fin." will get printed.

```
start = 1.0
while start > 0.0:
    start = start / 2
print("Fin.")
```

3. (2 points) List what gets printed for all eight possibilities of the conditions.

```
if a:
    print("a")
    if b:
        print("b")
        if c:
            print("c")
        else:
            print("d")
    else:
        print("e")
else:
    print("f")
```

4. (2 points) The following code was written to create a list of lists ys that contains all possible prefixes of the list xs. For example, on xs = [1, 2, 3], we need ys = [[], [1], [1, 2], [1, 2, 3]]. Explain the mistake in the program and fix the error.

```
ys = []
for i in range(len(xs)):
    ys.append(xs[:i])
```

5. (2 points) Rewrite the following loop and into an equivalent one without using **break** and **continue** statements.

```
i = 0
while i < 100:
    if i % 2 == 0:
        i = i + randrange(1, 10)
        continue
    if i % 5 != 0:
        break
    print(i)
    i = i + randrange(1, 10)
```

```
if choice([0, 1]) == 0:
    if choice([0, 1]) == 1:
        print("a")
    else:
        print("b")
    print("c")
```

Someone rewrote it to:

```
a = choice([0, 1])
if a == 0 and a == 1:
    print("a")
else:
    print("b")
print("c")
```

Argue why they are not equivalent. Write an equivalent code to the first one without using nested **if−else** blocks.

6. (3 points) Given the following code: