Write all your answers legibly. If we cannot read your handwriting, your solution will not be graded. Notes and electronics are not allowed.

Name: ___________________________ UIN: ___________________________

1. (6 points) **Circle** the right answer(s) for the following statement

*Python Lists are:*

a. Mutable
b. Immutable
c. Ordered
d. Unordered
e. Indexable

2. (6 points) **Circle** the right answer(s) to the following question
Which of the following datatypes can be used as a sequence for a loop?

a. String
b. Integer
c. List
d. Range object
e. Boolean

3. (6 points) **Circle** the right answer(s) for the following statement

*Python List comprehension is used for:*

a. Understanding the datatypes of the elements entered in a list
b. Slicing a list in sub-lists of equal length
c. Creating a new list from another iterable
d. Removing duplicate elements from a list

4. (6 points) **Circle** the right answer(s) for the following statement

What is the expected output for this line of code: `list(range(0, 10, 2))`

a. [1, 3, 5, 7, 9]
b. range(0, 10, 2)
c. (0, 10, 2)
d. error
e. [0, 2, 4, 6, 8]
f. [0, 1, 2, 3, 4, 5, 6, 7, 8, 10]
5. (8 points) What is the expected output of the following program?

Write your answers in the box below

```
for val in "hello":
    if val == "l":
        break
    print(val)
print("end")
```

```
h
e
end
```

6. (8 points) What is the expected output of the following program?

Write your answers in the box below

```
for val in "hello":
    if val == "l":
        continue
    print(val)
print("end")
```

```
h
e
end
```

7. (8 points) What is the expected output of the following program?

Write your answers in the box below

```
for val in "hello":
    if val == "l":
        pass
    print(val)
print("end")
```

```
hello
e
end
```
8. (14 points) What is the expected output for this program?

Write your answers in the box below

```
num = 4
if num < 0:
    print("Enter a positive number")
else:
    acc = 0
    while(num > 0):
        acc += num
        num -= 1
    print(acc)
```

9. (14 points) What is the expected output for this program?

Write your answers in the box below

```
num = 4
fact = 1
if num < 0:
    print("Enter a positive number")
elif num == 0:
    print(1)
else:
    for i in range(1, num + 1):
        fact = fact*i
    print(fact)
```

10. (10 points) What is the expected output for this program?

Write your answers in the box below

```
numbers = [2 * n + 1 for n in range(10) if 2 * n <= 10]
print(numbers)
```

[1, 3, 5, 7, 9, 11]
11. (14 points) What are the expected outputs for this program?

Write your answers in the boxes below

```python
roster = [1, 2, 3, 4]
print(roster[2:4])
print(roster[:3])
print(roster[4:1:-1])

roster.append(9)
print(roster)

roster.remove(3)
print(roster)

roster.insert(-1, "v")
print(roster)

print(roster.pop())
print(roster.pop(1))
```

<table>
<thead>
<tr>
<th>Line 2</th>
<th>[3, 4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 3</td>
<td>[1]</td>
</tr>
<tr>
<td>Line 4</td>
<td>[4, 3]</td>
</tr>
<tr>
<td>Line 7</td>
<td>[1, 2, 3, 4, 9]</td>
</tr>
<tr>
<td>Line 10</td>
<td>[1, 2, 4, 9]</td>
</tr>
<tr>
<td>Line 13</td>
<td>[1, 2, 4, 'v', 9]</td>
</tr>
<tr>
<td>Line 15</td>
<td>9</td>
</tr>
<tr>
<td>Line 16</td>
<td>2</td>
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</tbody>
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