1. What is the output of this code (what is printed)?

```python
n = 3
while n > 0:
    if (n == 5):
        n = -99
    print(n)
    n = n + 1
```

A. 3
   4

B. 3
   4
   5

C. 3
   4
   -99

D. 3
   4
   5
   -99

E. I don’t know

2. What is the output of this code (what is printed)?

```python
n = 3
while n > 0:
    if (n == 5):
        n = -99
    print(n)
    n = n + 1
```

With each iteration n will be

3
4
5 (which triggers if statement), then -99

so this code will print

3
4
-99

A. 3
   4

B. 3
   4
   5

C. 3
   4
   -99

D. 3
   4
   5
   -99

E. I don’t know
3. A valid password is one that is length 5 and starts with "xy". A valid password should terminate the loop. Which of these implements that specification?

The input function reads a string typed by the user, that is it prints its argument as a prompt and returns whatever the user types as a string (after the user hits enter).

A while True:
    s = input("Enter a password: ")
    if len(s) == 5 and s[:2] == 'xy':
        break

B s = input("Enter a password: ")
    while len(s) == 5 and s[:2] == 'xy':
        s = input("Enter a password: ")

C Both A & B are correct

D Neither A or B are correct

E I don't know

4. A valid password is one that is length 5 and starts with "xy". A valid password should terminate the loop. Which of these implements that specification?

The input function reads a string typed by the user, that is it prints its argument as a prompt and returns whatever the user types as a string (after the user hits enter).

A while True:
    s = input("Enter a password: ")
    if len(s) == 5 and s[:2] == 'xy':
        break

B s = input("Enter a password: ")
    while len(s) == 5 and s[:2] == 'xy':
        s = input("Enter a password: ")

C Both A & B are correct

D Neither A or B are correct

E I don't know

5. Will the following loop terminate, be guaranteed to be an infinite loop or will it depend?

a = 0
i = 0
while i < 10:
    a = a + 1

A Terminate or not execute

B Infinite loop

C Depends

A is correct, the loop will continue until s satisfies the specifications. B is incorrect as the loop will continue while s meets the specification, not terminate.
6. Will the following loop terminate, be guaranteed to be an infinite loop or will it depend?

```python
a = 0
i = 0
while i < 10:
    a = a + 1
```

Answer: B. This loop will be an infinite loop because the loop body does not change i, which remains < 10.