1. **False**
2. **True**
3. **False**
4. **True**
5. **False**
6. **True**
7. **True**
8. **False**
9. **True**
10. **False**
    1. **c**
    2. **a**
    3. **d**
    4. **c**
    5. **b**
    6. **b**
    7. **b**
    8. **a**
    9. **b**
    10. **d**

**1. Six Steps in the Software Development Process**

1. gathering all the necessary requirements from stakeholders. It focuses on understanding what the software should do, what problems it will solve, and any constraints.
2. developers create a blueprint for the software. This includes system architecture, user interfaces, and how different components will interact.
3. Developers translate the design into code using programming languages, this step turns concepts into functional software.
4. the software undergoes tests to identify and fix bugs so as to ensures that the software meets the specified requirements and works as intended.
5. The software is released to users, this can involve installation, distribution, or making it available online.
6. **Lastly,** the software needs ongoing support. Which includes fixing any new bugs that arise, updating the software for compatibility, and adding new features based on user feedback.

**2. Chaos.py Program**

Here’s a simple example of what chaos.py might look like, along with the requested markings:

python

Copy code

import random # comment: import statement

for i in range(10): # comment: loop

print(random.random()) # comment: output

* **Identifiers**: Circle random, i
* **Expressions**: Underline range(10), random.random()
* **Types of Statements**:
  + import random - import
  + for i in range(10): - loop
  + print(random.random()) - output

**3.**

* **Definite Loop**: This refers to a loop that runs a specific number of times, which is often determined at the start.
* **For Loop**: A specific type of definite loop that iterates over a sequence.
* **Counted Loop**: This is another term for a definite loop where the number of iterations is counted.

**4a)**

0

1

4

9

16

b)

3 1 4 1 5

(c)

Hello

Hello

Hello

Hello

(d)

0 1

1 2

2 4

3 8

4 16

**5)**

* It helps one to focus on the logic and structure without getting bogged down by syntax.
* It helps to easily revise the algorithm without rewriting code.
* It improves communication with others who may not know Python but understand logical steps.
* It serves as a blueprint for coding and making the transition smoother.

**6)**

The sep parameter in the print function defines what string will be placed between multiple outputs.

For example:

python

Copy code

print("Hello", "World", sep="-")

**Output**:

Copy code

Hello-World

**7. Executing the Code**

python

Copy code

print("start")

for i in range(0):

print("Hello")

print("end")

**Prediction**: The output will be:

sql

Copy code

start

end