1) Define Software
Software is a set of instructions (programs) that tells the computer how to perform specific tasks.

2) Define Programming Language
A programming language is a medium to write instructions (code) that a computer can understand and execute.
- Low-level: Machine language (0s and 1s), Assembly.
- High-level: Python, Java, C++.
- Markup: HTML, XML (not programming, but structuring).

3) What is pip in Python? What is PEP8?
- pip: Python's package manager. Used to install external libraries.
- PEP8: Python Enhancement Proposal 8. Defines coding style guidelines.

4) What are *args and **kwargs in Python?
- *args: Variable number of positional arguments (tuple).
- **kwargs: Variable number of keyword arguments (dict).

5) What is Python?
Python is a high-level, interpreted, object-oriented, dynamically typed programming language.

6) What is File Handling in Python?
File handling allows reading/writing files in modes: r, w, a, b.

7) Difference between Lambda and User-defined Function
- Lambda: Anonymous, single-line function.
- User-defined: Defined with def, can have multiple lines.

8) What is List Comprehension?
A concise way to create lists. Example: [x**2 for x in range(5)]

9) What is OOP in Python? Features:
Encapsulation, Inheritance, Polymorphism, Abstraction.

10) Can we pass a function as an argument in Python?
Yes. Functions are first-class citizens.

11) What is a Dynamically Typed Language?
Variable types are decided at runtime (no need to declare types).

12) What is a Docstring in Python?
Documentation string for functions/classes.

13) Program: Count character occurrence in a string
s = "banana"
count = {}
for ch in s:
count[ch] = count.get(ch, 0) + 1
print(count)

14) Program: Find missing number in a list
nums = [1,2,4,5]
n = len(nums)+1
total = n*(n+1)//2
print(total - sum(nums))

15) Program: Sort a list without sort()
nums = [4,2,9,1]

```python
for i in range(len(nums)):
for j in range(i+1,len(nums)):
if nums[i]>nums[j]:
nums[i],nums[j]=nums[j],nums[i]
print(nums)
```

16) Program: Prime factors of a number (28)
```python
n=28
i=2
factors=[]
while n>1:
if n%i==0:
factors.append(i)
n//=i
else:
i+=1
print(factors)
```

17) Fibonacci series up to N terms
```python
def fib(n):
a,b=0,1
for _ in range(n):
print(a,end=" ")
a,b=b,a+b
```

18) Swap two numbers without third variable
```python
a,b=5,10
a,b=b,a
print(a,b)
```

SQL Questions:
- Difference between UNION and UNION ALL:
UNION removes duplicates, UNION ALL keeps all rows.

- Difference between DELETE, TRUNCATE, DROP:
DELETE: removes rows with condition.
TRUNCATE: removes all rows, faster, no rollback.
DROP: removes entire table.

- Difference between Primary Key and Foreign Key:
Primary Key: unique identifier in a table.
Foreign Key: references primary key in another table.

- Difference between WHERE and HAVING:
WHERE: filters rows before grouping.
HAVING: filters groups after aggregation.