- 1.Boilerplate Standardized code that is commonly included in multiple places with minimal modification.
- 2. Dynamic Typing Python allows variable types to be determined at runtime instead of being explicitly declared.
- 3. Variables Named storage locations that hold data and can change during program execution.
- 4.Constants Fixed values that do not change throughout the execution of a program (by convention, written in uppercase).
- 5. **Identifiers** The names used to identify variables, functions, classes, and other objects.
- 6. Immutable Data types that cannot be modified after creation, such as tuples and strings.
- 7. Mutable Data types that can be changed after creation, such as lists and dictionaries.
- 8.Indentation Python uses indentation to define code blocks instead of curly braces {}.
- 9. **Interpreter** The Python program that reads and executes Python code line by line.
- 10.Script A Python file (.py) containing executable code.
- 11. Module A file containing Python code that can be imported and reused.
- 12. Package A collection of modules organized in directories containing an \_\_init\_\_.py file.
- 13. Library A collection of modules and functions that extend Python's capabilities.

- 14.PIP (Package Installer for Python) The standard tool for installing Python packages from the Python Package Index (PyPI).
- 15.List Comprehension A concise way to create lists using a single line of code.
- 16. Tuple An immutable sequence type.
- 17. Dictionary A key-value data structure (dict).
- 18.Set An unordered collection of unique elements.
- 19.Loop A construct used for iteration (for and while loops).
- 20. Function A reusable block of code defined using def.
- 21. Lambda Function A small anonymous function defined using lambda.
- 22. Class A blueprint for creating objects.
- 23. Object An instance of a class.
- 24.Method A function defined inside a class.
- 25. Inheritance A mechanism allowing one class to derive from another.
- 26. Encapsulation The practice of keeping data and methods safe from outside interference.
- 27.**Polymorphism -** The ability to use the same interface for different data types.

- 28. Decorator A special function that modifies the behavior of another function or class.
- 29. Generator A function that yields values lazily using yield instead of return.
- 30. Iterator An object that can be traversed using next().
- 31. Exception Handling The use of try, except, and finally to manage runtime errors.
- 32.Docstring A string used to document a function, class, or module.
- 33.**Global Scope -** Variables that are accessible throughout the script.
- 34.Local Scope Variables that are accessible only within a function.
- 35. Virtual Environment An isolated Python environment for managing dependencies.
- 36. Garbage Collection Python's automatic memory management to reclaim unused memory.
- 37. Threading Running multiple tasks concurrently using threads.
- 38. Asynchronous Programming Using async and await to handle tasks that run independently.
- 39. Type Hinting The practice of annotating function arguments and return types (def add(x: int, y: int) -> int).
- 40.**List Slicing** Extracting portions of lists using indices (list[start:end:step]).

- 41.Regex (Regular Expressions) A sequence of characters defining a search pattern.
- 42.**PEP (Python Enhancement Proposal) -** A design document providing guidelines and features for Python.
- 43.**Zen of Python** A set of guiding principles for Python programming (import this).
- 44. Duck Typing Python's principle of treating objects based on their behavior rather than their class.
- 45.Comprehensions Syntax constructs like list, dictionary, and set comprehensions.
- 46.**F-Strings** A modern way of formatting strings (f"Hello, {name}").
- 47.Metaclass A class of a class that defines how classes behave.
- 48.Magic Methods (Dunder Methods) Special methods prefixed and suffixed by double underscores (\_\_init\_\_, \_\_str\_\_, etc.).
- 49.**Hashable -** Objects that have a fixed hash value and can be used as dictionary keys.
- 50. Shallow Copy vs Deep Copy Cloning objects where a shallow copy copies references, and a deep copy creates a new independent object.