**Python:**

1. **What is the output of print(2\*\*3)?**
   * A) 6
   * B) 8
   * C) 9
   * D) 16

**Answer: B) 8**

1. **How do you insert comments in Python code?**
   * A) Using // symbols
   * B) By enclosing text in triple quotes (''' or """)
   * C) By using the # symbol
   * D) With the /\* \*/ syntax

**Answer: C) By using the # symbol**

1. **What does the len() function do?**
   * A) Returns the length of an object
   * B) Converts a string to lowercase
   * C) Finds the maximum value in a list
   * D) Calculates the square root

**Answer: A) Returns the length of an object**

1. **How do you create a list in Python?**
   * A) By using parentheses
   * B) By placing comma-separated values inside square brackets
   * C) With curly braces
   * D) Using angle brackets

**Answer: B) By placing comma-separated values inside square brackets**

1. **What is slicing in Python?**
   * A) A way to divide a pizza
   * B) A method to split strings
   * C) A way to retrieve a subset of values from a sequence
   * D) A technique to create custom data types

**Answer: C) A way to retrieve a subset of values from a sequence**

1. **What is the difference between list and tuple?**
   * A) Lists are mutable, tuples are immutable
   * B) Tuples are mutable, lists are immutable
   * C) Both lists and tuples are mutable
   * D) Neither lists nor tuples are mutable

**Answer: A) Lists are mutable, tuples are immutable**

1. **How do you handle exceptions in Python?**
   * A) Using try and except blocks
   * B) Ignoring them
   * C) Using if statements
   * D) Praying to the programming gods

**Answer: A) Using try and except blocks**

1. **What is a dictionary in Python?**
   * A) A book with words and their meanings
   * B) A collection of key-value pairs
   * C) A list of ordered elements
   * D) A mathematical function

**Answer: B) A collection of key-value pairs**

1. **What is the purpose of the pass statement in Python?**
   * A) To skip a loop iteration
   * B) To define an empty block of code
   * C) To break out of a loop
   * D) To pass arguments to a function

**Answer: B) To define an empty block of code**

1. **What does the range() function return?**
   * A) A random number
   * B) A sequence of numbers, starting from 0 by default
   * C) The factorial of a given number
   * D) The square of a given number

**Answer: B) A sequence of numbers, starting from 0 by default**

**OOP:**

1. **What is Object-Oriented Programming?**
   * A) A way to organize your room
   * B) A programming paradigm based on objects
   * C) A type of coffee
   * D) A dance style

**Answer: B) A programming paradigm based on objects**

1. **What is a class?**
   * A) A group of students in a school
   * B) A blueprint for creating objects
   * C) A type of function
   * D) A mathematical concept

**Answer: B) A blueprint for creating objects**

1. **What is an instance?**
   * A) A moment in time
   * B) A concrete occurrence of any object
   * C) A type of variable
   * D) A synonym for “class”

**Answer: B) A concrete occurrence of any object**

1. **What is encapsulation?**
   * A) The process of hiding data
   * B) The bundling of data with methods
   * C) A type of inheritance
   * D) A way to create objects

**Answer: B) The bundling of data with methods**

1. **What is polymorphism?**
   * A) The ability to change color
   * B) The ability to take on many forms
   * C) The ability of different object types to be accessed through the same interface
   * D) The ability to multiply rapidly

**Answer: C) The ability of different object types to be accessed through the same interface**

1. **What is inheritance in OOP?**
   * A) The process of acquiring traits from ancestors
   * B) The mechanism by which one class can inherit the attributes and methods of another class
   * C) The act of inheriting property
   * D) A feature that allows classes to inherit features from other classes

**Answer: B) The mechanism by which one class can inherit the attributes and methods of another class**

1. **What is method overriding?**
   * A) Changing the way a method works
   * B) Using a method from the parent class
   * C) Allowing a child class to provide a specific implementation of a method that is already defined in its parent class
   * D) Overloading a method with different parameters

**Answer: C) Allowing a child class to provide a specific implementation of a method that is already defined in its parent class**

1. **What is an abstract class?**
   * A) A class that cannot be instantiated
   * B) A class that can only contain abstract methods
   * C) A class that is not concrete
   * D) A class used for artistic purposes

**Answer: A) A class that cannot be instantiated**

1. **What is an interface?**
   * A) The user interface of an application
   * B) A group of related methods with empty bodies
   * C) A type of data structure
   * D) A communication system between different software components

**Answer: B) A group of related methods with empty bodies**

1. **What is a constructor?**
   * A) A person who builds things
   * B) A special method used to initialize objects
   * C) A function that destroys objects
   * D) A method that returns the class name

**Answer: B) A special method used to initialize objects**

1. **What is the difference between a class variable and an instance variable?**
   * A) Class variables are local, instance variables are global
   * B) Class variables are for methods, instance variables are for constructors
   * C) Class variables are shared by all instances, instance variables are unique to each instance
   * D) There is no difference

**Answer: C) Class variables are shared by all instances, instance variables are unique to each instance**

1. **What is a static method?**
   * A) A method that cannot be changed
   * B) A method that belongs to the class rather than any object instance
   * C) A method that is always called first
   * D) A method used to create static variables

**Answer: B) A method that belongs to the class rather than any object instance**

1. **What is a class method?**
   * A) A method that teaches you how to use the class
   * B) A method that takes the class itself as its first argument
   * C) A method that can only be called by class instances
   * D) A method that creates a new class

**Answer: B) A method that takes the class itself as its first argument**

1. **What is composition in OOP?**
   * A) The act of writing music
   * B) A way to combine simple objects or data types into more complex ones
   * C) The first paragraph of an essay
   * D) A method of inheritance

**Answer: B) A way to combine simple objects or data types into more complex ones**

1. **What is the super() function used for?**
   * A) To call a method from the parent class
   * B) To increase the power of a method
   * C) To override a method in the child class
   * D) To call the superclass constructor

**Answer: A) To call a method from the parent class**

1. **What is the principle of “Don’t Repeat Yourself” (DRY)?**
   * A) A principle aimed at reducing repetition of software patterns
   * B) A rule that prevents using the same variable name twice
   * C) A guideline for writing documentation
   * D) A coding style that avoids loops

**Answer: A) A principle aimed at reducing repetition of software patterns**

1. **What is coupling in OOP?**
   * A) The degree of interdependence between software modules
   * B) The process of joining two classes together
   * C) A type of relationship between objects
   * D) A feature that allows two methods to share the same name

**Answer: A) The degree of interdependence between software modules**

1. **What is cohesion in OOP?**
   * A) The degree to which elements of a module belong together
   * B) The process of sticking objects together
   * C) A measure of how well class members support each other
   * D) The attraction between molecules of the same substance

**Answer: A) The degree to which elements of a module belong together**

1. **Which of the following defines a constructor in Python?**
   * A) \_\_create\_\_(self)
   * B) \_\_init\_\_(self)
   * C) \_\_construct\_\_(self)
   * D) \_\_build\_\_(self)

**Answer: B) \_\_init\_\_(self)**

1. **What does the self keyword represent in Python?**
   * A) The class itself
   * B) The instance of the class
   * C) The module containing the class
   * D) The superclass of the class

**Answer: B) The instance of the class**