1] What is File function in python? What is keywords to create and write file.

- It enables you to create ,read,write,append,rename,and delete files.
- Python treats files differently as text or binary.
- Each line of code includes a sequence of character and they form a text file.
- To create a new file in python ,you can use the open() function.
- The open() function required two parameters the filename and the mode.
- The mode represent the purpose of opening the file.
  - Here some commonly used mode
    - x: create a new file
    - r : open an existing file for reading.
    - w: open an existing file or writing.
    - a: open an existing file or appending.

2] Explain Exception handling? What is an Error in Python?

- Exception handling is a mechanism that allows you to handle and recover from error that occur during program execution.
- It helps you prevent your program crashing and allows you to gracefully handles errors.
- You can catch and handle exception using the try and except statement.
- To handle exception in python ,you can use the try and except block.
- The code that might raise an exception is placed inside the except block.

3] How many except statements can a try-except block have? Name

Some built-in exception classes:

- valueError: raised when a funcation receives an argument of the correct type but an inapporiate value.
- typeError : raised when an operation or funcation is applied to an object of inapporative type.
- zeroDivisionError : raised when division or module operation is performed with zero as the divisor.

- ❖ indexError: raised when a sequence subscript is out of range.
- ❖ keyError: raised when a dictionary key is not found
- ❖ fileNotFoundError: raised when a file or directory is requested but cannot be found.

4] When will the else part of try-except-else be executed?

- ➢ In a try-except-else block in python, the else part is executed only if no exception are raised in the try block.
- ➢ It is optional and provides a way to specify code that should be executed when no exception occur.

5] Can one block of except statements handle multiple exception?

- ➢ Yes, a single block of except statements in a try-except block in python can handle multiple exceptions.
- ➢ This allows you to group similar exceptions together and handle them using the same code block.
- ➢ You can also use separate except blocks for each exception if you want to handle them differently .
- ➢ It depends on your specific requirements and the actions you want to take when an exception occurs.

6] When is the finally block executed?

- ➢ In Python, the `finally` block is always executed after the `try` and `except` blocks.
- ➢ It is executed regardless of whether an exception was raised or not.
- ➢ The `finally` block is used to execute code that must be run regardless of whether an exception was raised or not.

7] What happens when „1"== 1 is executed?

- This is because the string '1' is not equal to the integer 1.
- In Python, the == operator is used to compare two values for equality. If the two values are equal, the expression evaluates to True.

8] How Do You Handle Exceptions With Try/Except/Finally In Python? Explain with coding snippets.?

- In Python, we use the `try`, `except`,and `finally` statements to handle exceptions.
- The `try` block contains the code that might raise an exception, and the `except` block
- contains the code that will execute if an exception is raised.
- The `finally` block contains the code that will execute regardless of whether an exception is raised or not

9]How to Define a Class in Python? What Is Self? Give An Example Of A Python Class

- Defining a class in Python is a way to create a blueprint for
- objects that share common attributes and methods. Here's an example:-

```
class Car:
def __init__(self, make, model, year):
  self.make = make
  self.model = model
  self.year = year
```

```
    def get_make(self):
        return self.make
```

10] Explain Inheritance in Python with an example? What is init? Or What Is A Constructor In Python?

- Inheritance is a way of creating a new class that is a modified version of an existing
- class.
- The new class, called the **child class**, inherits the properties and methods of the existing
- class, called the **parent class**.
- The child class can also have its own properties and methods.
- In Python, you can create a child class by defining it with the name of the parent class in
- Parentheses

11] What is Instantiation in terms of OOP terminology?

```
class MyClass:
        def __init__(self, arg1, arg2):
            self.arg1 = arg1
            self.arg2 = arg2
        my_object = MyClass("Hello", 42)
```

- in this code, we define a class `MyClass` with a constructor that takes two arguments `arg1` and `arg2`.

- We then create an instance of this class called `my_object` by calling the class name followed by parentheses containing the arguments `"Hello"` and `42`.

12] What is used to check whether an object o is an instance of class A

- In Python, you can use the built-in function isinstance() to check whether an object o is an instance of class A.
- Here's an example:

```
class A: pass class B(A): pass obj = B()
print(isinstance(obj, A)) # True
```

13]What relationship is appropriate for Course and Faculty

- The relationship between a course and faculty can be modeled in various ways, depending on the context and requirements of the system. Here are some possible relationships:
- One-to-one: A course is taught by only one faculty member, and a faculty member teaches only one course. 1
- One-to-many: A course is taught by one faculty member, but a faculty member can teach multiple courses.
- Many-to-many: A course can be taught by multiple faculty members, and a faculty member can teach multiple courses.

14] What relationship is appropriate for Student and Person?

- In this case, the Student class inherits all the attributes and methods of the Person class, such as name, age, address, etc.
- Additionally, the Student class can have its own attributes and methods that are specific to students, such as grade point average (GPA), courses taken, etc.