One Marks Question

1. How can you connect Python to a MySQL database?
2. What does the break statement do in Python loops?
3. What is the purpose of the return statement in a function?
4. What is encapsulation in OOP?
5. How do you import a module in Python?
6. nameList = [“Jhon Break”,”Nelson Dia”,”Miller joe”]

   Convert the above list to tuple.
7. Consider a python code as follows.

```
def myFun(x, y=50):
        print("x: ", x)
    print("y: ", y)
myFun(10)
```

8. What output do you expect from the above code?
9. State any 2 popular application of python.
10. How do you define a function in Python?

    A. function my_function()

    B. def my_function():

    C. function: my_function()

    D. def: my_function()

11. What is polymorphism in Object-Oriented Programming?
12. Define a Python module.

Five Fill in the blanks

1. The command import module name is used to import a _____ in Python.
2. In Python, _____ is used to define a block of code inside a function.
3. The concept of _____allows a child class to inherit the properties of a parent class.
4. To handle an exception, we use _____ block in Python.
5. A _____ is a named collection of Python modules.
6. _____ function is used to delete one record (document) from mongodb.
7. x = ‘Welcome’

   print(x[3:6]

   ouptput for the above code would be _____

8.to remove dictionary item, you can use _____ method
9._____ stores unique items in an unordered way, and it is written using curly brackets {}.
10. A function in Python is defined using the _____ keyword. A
11. class is a blueprint for creating _____ in Python.
12.A _____ is a collection of modules organized in directories.

Short Questions

1. Explain the difference between a list and a tuple in Python.
2. What are the different types of function arguments in Python?
3. Define and explain the concept of Object-Oriented Programming (OOP) in Python.
4. What are modules and packages in Python? How do they help in code organization?
5. Explain how exception handling is implemented in Python with an example.
6. Explain try, except and finally block of python with an example.
7. Write a short note on data types in python.
8. Write a constructor for class employee with at least three data members. Make sure that each of these data member must have different access.
9. What is base class and derived class in python ? Explain with an example.
10.Describe the role of conditional statements in Python and explain how if-elif-else statements are used with an example.
11. How do you handle an exception in Python? Define inheritance and its purpose in object-oriented programming. Write a Python program to calculate the factorial of a number using a for loop.
12.Explain the purpose of the __init__.py file in Python packages with an example.

Long Question 4M each

1. Explain the different types of loops in Python with examples.
2. What is inheritance in Python? Explain different types of inheritance with an example.
3. Describe Python's file handling mechanism with examples of reading and writing files.
4. (1) Write a command that insert multiple documents in mongodb database (database name: voteDb). Each document must have at least 2 or more keys.
5. (2) Explain any two functions of string module with an example.
6. (3) Explain polymorphism feature of python with an example code.
7. Describe the differences between lists, sets, tuples, and dictionaries in Python. Provide an example for each.
8. Explain the significance of the with statement in Python for file handling. Provide an example.

9. Describe how the try, except, and finally blocks are used in Python to handle exceptions with an example.

Long Answer 5M each

1. Write a Python program that demonstrates the use of classes and objects.
2. What are Python dictionaries? Explain their features and demonstrate how to add, update, and delete items from a dictionary.
3. Explain the working of Git integration with PyCharm and the importance of version control in Python development.
4. What are Access Specifiers in Python?
5. Write a python program that takes an integer argument and print the table of that integer. Display input error if input value is 0 or –ve.
6. Describe how to open, read, and write to a file in Python. Provide a program example that writes a string to a text file and then reads the content
7. Write a Python program to connect to a MySQL database, create a table, insert data into it, and fetch the data. Explain each step of the process.
8. Explain how to create and use a custom Python package. Provide an example where you create a package with two modules and demonstrate how to use it in a Python program.