K24U 0858

Reg. No. : .....

Name : .....

**IV Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, April 2024**
**(2020 to 2022 Admissions)**
**Complementary Elective Course for B.Sc. Life Sciences (Zoology) and Computational Biology**
**4C04 CSC-ZCB : COMPUTATION USING PYTHON**

Time : 3 Hours Max. Marks : 32

PART – A
**(Short Answer)**

Answer **all** questions. **(5×1=5)**

1. Which Python module is commonly used for data visualization ?
2. What is the use of zeros and ones function in NumPy library ?
3. Write any 2 examples for Built in Exceptions in Python.
4. What is the purpose of super( ) function in Python ?
5. Write any 2 features of Python.

PART – B
**(Short Essay)**

Answer **any 4** questions. **(4×2=8)**

6. Explain different types of function arguments in Python with example.
7. What is recursive function ? Give example.
8. What is class in Python and how it is defined ?

P.T.O.

9. Explain multilevel inheritance with suitable example.

10. What is sets in Python ? Explain any 3 set operations.

11. What do you mean by 2D array ? How it is initialized using NumPy in Python ?

## PART – C
## (Essay)

Answer **any 3** questions. **(3×3=9)**

12. Write a Python program to plot the function sin x.

13. Write a program to input n numbers and display the sum and average of non-negative numbers.

14. Explain the significance of file handling in Python. Explain the primary operations involved in the file handling.

15. Discuss the concept of inheritance and its various types in Python object oriented concepts.

16. Differentiate between Break and Continue in Python. Give example.

## PART – D
## (Long Essay)

Answer **any 2** questions. **(2×5=10)**

17. Discuss the fundamental principles and concepts of Object-Oriented Programming (OOP) in Python, focusing on the significance of classes, object creation, built-in attribute methods, encapsulation, inheritance and polymorphism.

18. Explain the line plot, scatter plot, histogram and bar chart in representing various types of data. Give examples for each plot type in Python.

19. How is Exception handling implemented in Python ?

20. Discuss about the control statements in Python.

———————