ND—19—2023

FACULTY OF SCIENCE

B.Sc. (CS) (Third Year) (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(Python)

(Tuesday, 5-12-2023)   **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 Hours   *Maximum Marks*—75

N.B. :— (i)   *All* questions are compulsory.

      (ii)   Figures to the right indicate full marks.

1.   Attempt any *five* of the following (**3** marks each) :   15

   (a)   Write a short note on Python.

   (b)   Differentiate between List and tuples.

   (c)   Define Pickling in detail.

   (d)   What is Python Interpreter ? Explain in detail.

   (e)   Program to check whether a person is eligible to Vote or not.

   (f)   Program to find sum of all items in a Dictionary.

   (g)   Define functions and arguments with example.

                                  P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

   (*a*) What are the common built-in data types in Python.

   (*b*) Write a program to print the largest of three numbers.

   (*c*) Explain the data types in Python.

   (*d*) Write a program to find the area of circle.

   (*e*) Explain Dictionaries and sets collection in Python.

3. Attempt any *three* of the following (**5** marks each) : 15

   (*a*) What are the modules and packages in Python ?

   (*b*) What are the CSV/Excel file in Python ?

   (*c*) Write a program to create text file with a text "I am an IT professional".

   (*d*) Explain exception handling concept with example.

   (*e*) Write a program to sort the given list in ascending as well as descending order :

   L1 = [58, 47, 99, 32, 18, 2, 46, 33, 18]

4. Attempt any *three* of the following (**5** marks each) : 15

   (*a*) Explain array and types of arrays with suitable example.

   (*b*) Explain Inheritance and types of Inheritance in Python. How does inheritance work in Python ? Explain it with an example.

   (*c*) Write a program to create a class 'Student' with member variable stu-ID, Stu_Name, Stu_marks.

(*d*)   Explain Polymorphism in detail.

(*e*)   Write and explain MySQL database query in Python.

5.   Write short notes on any *three* of the following (**5** marks each) :   15

(*a*)   Database connection in Python

(*b*)   Web using flask

(*c*)   Different loops in Python

(*d*)   Mathematical functions and constants

(*e*)   Exception Raising.