PAPER ID—10710

B.Tech. EXAMINATION, 2024

(Second Semester)

ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Code : CSE-104

Object Oriented Concepts and Python Programming

Time : 3 Hours *Maximum Marks : 70*

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *four* questions from Unit II. Q. No. **1** (Unit I) is compulsory. All questions carry equal marks.

P.T.O.

Unit I

1. (a) Explain subscript operator.

   (b) Define the scope and lifetime of a variable in Python.

   (c) What do you mean by immutable variables ?

   (d) Define Tuples.

   (e) Explain Classes.

   (f) Define Encapsulation.

   (g) How to create Label widget in Python ?

2×7=14

Unit II

2. Explain various types of Control statements used in Python. **14**

3. (a) Define String Manipulations. How to cut string in Python ? **7**

   (b) How text files are handled in Python ? **7**

4. What do you mean by Tuple ? Explain the design with functions. **14**

5. What is Inheritance ? And also explain its types. **14**

6. (a) Explain the attributes and methods. **7**

(b) Explain operator overloading with suitable example. **7**

7. Write short notes on the following :

(a) Creating simple GUI **5**

(b) Widget attributes **5**

(c) Tkinter module. **4**