(T) Roll No. .....

PAPER ID—10714

Bachelor of Technology (Electrical Engineering), Bachelor of Technology in Electronics Engineering (VLSI Design Technology), Bachelor of Technology (Electrical & Electronics Engineering), Bachelor of Technology (Electronics & Communication Engineering)

EXAMINATION, 2025

(Second Semester)

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 *one* question from each Section. Q. No. **1** is compulsory. All questions carry equal marks.

1. Write the following : **7×2=14**

(a) Describe the use of class __init__() method.

(b) Write a Python script to swap two numbers using a temporary variable.

(c) Write a function that takes two numbers and returns their Greatest Common Divisor (GCD).

(d) Differentiate between if, elif, and else statements with examples.

(e) Discuss various file opening modes in python.

(f) Explain the concept of slicing in strings with an example.

(g) Discuss the purpose of break and continue statement in loop.

Section A

2. (a) Write a program that opens a file and counts the number of vowels in it. 7

   (b) Explain variables, assignments and data types in Python with appropriate examples. 7

3. (a) Write a program that uses a loop to print numbers from 1 to 50, skipping multiples of 5. 7

   (b) Explain string manipulation techniques in Python. 7

Section B

4. (a) Explain Recursion. Write a recursive function to calculate the factorial of a number. 7

   (b) Create a function that counts how many times each word occurs in a given list of words. Use a dictionary for the count. 7

5. (a) Explain the concept of hiding redundancy in program design. 7

(b) Write a program to maintain a student record using a dictionary where keys are names and values are marks. Allow the user to add, remove and update entries. 7

Section C

6. (a) What type of inheritance supports in Python ? Explain with suitable example. 7

(b) Create a class Person with instance variables name and age. Inherit another class Employee from Person and add a salary attribute. Write a method to display full detail. 7

7. (a) Differentiate between method overloading and method overriding with suitable example. 7

(b) Explain the principles of Object-Oriented Programming. 7

Section D

8. (a) Discuss about handling exceptions in details with example. 7

(b) What is the Package ? Give an example of package creation in Python. 7

9. (a) Discuss the GUI architecture in Python using Tkinter. What is the role of widgets and the mainloop() ? 7

(b) Write a Python Turtle program to draw a star using loops. 7

PAPER ID—10714

Bachelor of Technology (Electrical and Electronics Engineering)

EXAMINATION, 2024

(Second Semester)

PYTHON PROGRAMMING

Code : CSE-106

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 : Q. No. **1** is compulsory and all questions carry equal marks. Attempt *Five* questions in total, first being compulsory and selecting *four* from Unit.

Unit I

1. (a) Explain process of running a script.

   (b) Complexity used in Python.

   (c) What do you mean by Indexing ?

   (d) Define exception handling.

   (e) Explain the Window Components.

   (f) Define Numpy.

   (g) What do you mean by Searching ?

   2×7=14

Unit II

2. Explain the control statements string manipulations used in python. **14**

3. (i) What is Python ? State any four applications where Python is more popular ? **7**

(ii) Write a Python program that convert seconds to day, hour and minutes. 7

4. What do you mean by dictionary ? Explain the process of traversing dictionaries. 14

5. (a) What is the function to create a dictionary from a list in Python ? 7

   (b) Difference between List and Dictionary in Python. 7

6. (a) Explain design with classes persistence storage of objects. 7

   (b) Explain the terminal based and GUI based programs. 7

7. Write short notes on the following :

   (a) Image manipulation operations. 5

   (b) Properties of images. 5

   (c) Overview of Django 4

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B. Tech. (VLSI/ECE/EEE all Elect)

EXAMINATION, 2023

(Second Semester)

PYTHON PROGRAMMING

Time : 3 Hours *Maximum Marks : 70*

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Note : Attempt *Five* questions in all. Q. No. **1** is compulsory. All questions carry equal marks.

1. (a) Explain process of removing an element in list.

(b) Variables used in python.

(c) What do you mean by packages ?

(d) Define Image processing.

(e) Explain the polymorphism.

(f) Define redundancy.

(g) What do you mean by subscript operator ?

2x7=14

2. Explain various types of arithmetic operators and expressions used in python. **14**

3. (a) What is Python ? What are the benefits of using Python ? 7

   (b) Write a program to reverse the string using slicing. 7

4. What do you mean by list ? Explain the process of searching and sorting a list. **14**

5. What is a recursive function ? Write a program to finding the power of a number using recursive function. **14**

6. (a) Explain the GUI and Exception handling. 7

   (b) Explain operator overloading by considering a suitable example. 7

7. Write short notes on the following :

(a) Manipulating turtle screen 5

(b) Image manipulation operations 4

(c) How to create dashboard ? 5

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B. Tech. (VLSI/ECE/EEE all Elect)

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(Second Semester)

PYTHON PROGRAMMING

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