

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

III-B.TECH-I-Semester End Examinations (Regular) - December- 2025

PYTHON PROGRAMMING

(Common for CSC, CSM)

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

PART-A

(10 Marks)

1. a)	Which function is used to read input from the keyboard in Python?	[1M]
b)	What is the difference between the '=' and '==' operators?	[1M]
c)	Define a void function.	[1M]
d)	Name any two functions of the math module in Python.	[1M]
e)	Write the syntax to access a substring using slicing in Python.	[1M]
f)	Define recursion.	[1M]
g)	What is a class in Python?	[1M]
h)	Mention any two advantages of object-oriented programming.	[1M]
i)	What is the purpose of the Label widget in Tkinter?	[1M]
j)	What does the mainloop() function do in a Tkinter program?	[1M]

PART-B

(50 Marks)

2.a)	Write a Python program to read two numbers from the keyboard and display their sum, difference, and product.	[5M]
b)	Explain different types of operators in Python with examples.	[5M]
OR		
3.	Explain the different data types and type conversion functions available in Python with suitable examples.	[10M]
4.a)	Explain definite iteration with an example program.	[5M]
b)	Describe selection and conditional iteration with examples of if and while statements	[5M]

OR

5.a)	Explain the purpose of modules in Python. How do you create, import, and use a module in a program?	[5M]
b)	Write a Python program that defines a module containing functions to calculate the area of a circle and area of a rectangle, and call them from another program.	[5M]
6.a)	Explain how to access characters and substrings in a Python string using indexing and slicing.	[5M]
b)	Write a Python program to count vowels, consonants, digits, and spaces in a given string.	[5M]

OR

7.a)	Differentiate between lists, tuples, dictionaries, and sets with examples.	[5M]
b)	Write a Python program to store and display student data (name as key, marks as value) using a dictionary.	[5M]

8.a) Explain how functions can be used within classes. [5M]
b) Write a Python program to demonstrate instance variables and class variables using a Car class. [5M]

OR

9.a) Explain how to create and work with class instances. What are constructors and destructors? [5M]
b) Write a Python program to design a class BankAccount with methods for deposit, withdrawal, and balance display. [5M]

10. What are Radio buttons and Check buttons in Tkinter? Explain their purpose with suitable examples. [10M]

OR

11. Explain Turtle Graphics in Python. Describe methods for drawing basic two-dimensional shapes. [10M]
