

**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**

**IV-B.TECH-I-Semester End Examinations (Regular) - December- 2025**  
**PYTHON PROGRAMMING**  
**(ECE)**

**[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 and may have a, b, c as sub questions.

**PART-A**

**(10 Marks)**

1. a) What symbol is used for comments in Python? [1M]
- b) Differentiate between integer and floating-point data types. [1M]
- c) What is the purpose of the try keyword? [1M]
- d) Why are modules used in Python? [1M]
- e) How multithreading improves performance? [1M]
- f) Why is synchronization required in multithreading? [1M]
- g) What is Tkinter used for? [1M]
- h) Define CGI? [1M]
- i) What are parameterized queries? [1M]
- j) How a database connection is established in Python? [1M]

**PART-B**

**(50 Marks)**

2. Explain Python's core data types with suitable examples. [10M]

**OR**

- 3.a) Describe the behavior of type conversion functions like int(), float(), and str(). [10M]
- b) Explain the difference between mutable and immutable data types.

4. Implement a Python program to read and write in file and counts number of vowels. [10M]

**OR**

5. Discuss about Python manages files internally. Explain the difference between modules and packages. [10M]

6. Compare threading and multiprocessing approaches. Define regular expressions and their purpose. [10M]

**OR**

7. Discuss how deadlocks can occur in multithreaded programs. [10M]

8. Explain about Tkinter and module for GUI development. Explain the main features of Tkinter. [10M]

**OR**

9. Evaluate Python's suitability for GUI-based software development. [10M]

10. Justify the choice of SQLite for embedded Python applications. What are ORM frameworks? [10M]

**OR**

11. Explain about DB-API SQLite in detail. [10M]

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