

Code No.: CS513PE

R20

H.T.No.

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

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

PRINCIPLES OF PROGRAMMING LANGUAGES

(CSE)

[Time: 3 Hours]

[Max. Marks: 70]

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

Part A is compulsory which carries 20 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

(20 Marks)

1. a) Explain the features of denotational semantics. [2M]
- b) Which is the general problem of describing syntax? [2M]
- c) Differentiate between user defined and primitive data types with an example. [2M]
- d) Explain about the Enumerated data type. [2M]
- e) What is an overloaded subprogram? [2M]
- f) Give the two kind of abstractions in programming languages. [2M]
- g) Why does Java not have a destructors? [2M]
- h) Define an Exception and What are the exception handling keywords in java [2M]
- i) What are the basic elements of PROLOG? [2M]
- j) What are the applications of functional programming languages? [2M]

PART-B

(50 Marks)

- 2.a. Explain the different categories of languages. [5 M]
- b. What are the potential benefits of studying programming language concepts? [5 M]

OR

3. Explain with examples how syntactic design choices affect readability. [10M]
4. What do you mean by binding? Give examples of some of the bindings and their binding times. [10M]

OR

- 5.a Explain about the mixed-mode assignments that are used in Ada and Java Languages. [5 M]
- b. Explain about the type compatibility with an example. [5 M]

- 6.a. What is an overloaded subprogram explain with an example. [5 M]

- b. What are the characteristics of co-routine feature? List the languages which allow co-routines. [5 M]

OR

7. Explain the different parameter passing methods with an example. [10M]

- 8.a. What is semaphore? Explain the different types of semaphores. [5 M]

- b. Explain the design issues of an exception handling system. [5 M]

OR

- 9.a. Explain how to handle the Exceptions in C++. [5 M]

- b. Explain about the concurrency in Ada 95. [5 M]

10. Explain the different types of data types used in Python with examples. [10M]

OR

11. Write a function that computes the sum of numbers using vectors in LISP? [10M]
