

Code No.: (R22IT513PE)

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H.T.No.

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

III-B.TECH-I-Semester End Examinations (Regular) - December- 2024
PRINCIPLES OF PROGRAMMING LANGUAGES

(IT)

[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) Define attribute grammar. [1M]
- b) Define Syntax and Semantics of a language. [1M]
- c) Differentiate between overloading and overriding. [1M]
- d) What is binding? [1M]
- e) Define Block. Explain with an example in Ada. [1M]
- f) What is mean by message passing? [1M]
- g) Write about exception handling in Ada. [1M]
- h) What is concurrency? [1M]
- i) Compare imperative and functional languages. [1M]
- j) Define Prolog. Explain syntax of Prolog. [1M]

PART-B

(50 Marks)

- 2.a) Explain different phases of compilation processes. [5M]
 - b) Discuss about language recognizers and language generators. [5M]
- OR**
3. Describe the following languages evolution [10M]
i) FORTRAN ii) LISP iii) ALGOL iv) COBOL.
 4. Explain about evaluation of static scope and dynamic scope. [10M]
- OR**
5. Explain the attribute grammar and also write the attribute grammar for a simple assignment statement. [10M]
 6. Discuss about pass-by-result and pass-by-value-result parameter passing methods, with a detailed programming example for each. [10M]
- OR**
- 7.a) Define sub program. What are the distinct categories of subprograms? [6M]
 - b) Explain about generic subprograms in Ada and C++ languages. [4M]
 8. What is exception handling? How exceptions are handled in C++ and JAVA? [10M]
- OR**
9. Discuss the reasons for using exception handlers in a programming language. What if there exist programming languages with no exception handlers. [10M]
 10. Write about functional forms in LISP. [10M]
- OR**
- 11.a) Discuss the applications of functional languages. [5M]
 - b) Describe the two common mathematical functional forms that are provided by scheme. [5M]
