

Code: 4G133

III B.Tech. I Semester Supplementary Examinations October 2020

Principles of Programming Languages

(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

UNIT-I

1. a) Explain in detail about various languages evaluation criteria and the characteristics that affect them. 7M
- b) What are the factors that influence the basic design of Programming languages? 7M

OR

2. a) Give BNF and EBNF versions of an expression grammar? 7M
- b) Explain denotational semantics and axiomatic semantics? 7M

UNIT-II

3. a) Explain record, pointer and reference types with examples? 7M
- b) Explain about type checking, type compatibility, strong type? 7M

OR

4. a) Explain the design and implementation criteria used for record, union and array data types in programming languages. 7M
- b) Explain named constants and variable initialization with example. 7M

UNIT-III

5. a) Explain in detail about guarded commands. 7M
- b) Distinguish between static scoping and Dynamic scoping with example? 7M

OR

6. a) What are design issues for selection structures? 7M
- b) Define Co-routines? Write the design issues of Subprograms? 7M

UNIT-IV

7. a) Explain about Parameterized abstract data types with an example in C++? 7M
- b) Explain about generic sub programs. 7M

OR

8. a) Explain in detail about monitors and semaphores. 7M
- b) Discuss about exception handling in JAVA. 7M

UNIT-V

9. a) Write about functions in ML and Haskell. 7M
- b) Give applications of Logic programming. 7M

OR

10. a) List the applications of functional programming languages. 7M
- b) Give comparison of Functional and Imperative Languages. 7M
