

B.Tech II Year II Semester (R13) Supplementary Examinations December/January 2015/2016

PRINCIPLES OF PROGRAMMING LANGUAGES

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
 - (a) Write the advantages of implementing a language with a pure interpreter.
 - (b) What is the primary use of attribute grammars?
 - (c) Define structure type equivalence.
 - (d) Write the advantages of referential transparency.
 - (e) What are the three general characteristics of subprograms?
 - (f) Distinguish between overloaded subprogram and a generic subprogram.
 - (g) Write the use of monitors.
 - (h) Write the three forms of a prolog term.
 - (i) Define lazy evaluation.
 - (j) State the data types in python and give examples.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Explain the reasons for studying concepts of programming language.
(b) Write a short note on programming domains.

OR

- 3 (a) Explain attribute grammars with an example.
(b) Define denotational semantics. Give simple examples.

UNIT – II

- 4 (a) Discuss in detail the design and implementation issues of pointers and reference types.
(b) Write short notes on type checking.

OR

- 5 (a) Explain the different forms of assignment statements in imperative languages.
(b) Give a brief notes on short-circuit evaluation with an example.

UNIT – III

- 6 (a) Define the design issues for subprograms.
(b) Write short notes on coroutines.

OR

- 7 (a) What are overloaded subprograms? Explain with examples.
(b) Explain the design issues for functions.

UNIT – IV

- 8 (a) Discuss in detail about Ada support for concurrency.
(b) Write short notes about monitors.

OR

- 9 (a) Explain the concept of exception handling in java with an example.
(b) Illustrate and explain the basic elements of prolog.

UNIT – V

- 10 (a) Define fundamentals of functional programming languages.
(b) Distinguish between functional and imperative languages.

OR

- 11 (a) Explain the common characteristics of scripting languages.
(b) Define procedural abstraction. Give an example.