Code: CS4T4

II B.Tech - II Semester – Regular / Supplementary Examinations October – 2020

PRINCIPLES OF PROGRAMMING LANGUAGES
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours   Max. Marks: 70

PART – A

Answer *all* the questions.   All questions carry equal marks

11 x 2 = 22 M

1.
a) Define interpretation and pure interpretation.

b) Write about functional programming.

c) What mixed-mode assignments are allowed in C and Java?

d) Write any two design issues for arithmetic expressions.

e) Define sub program.

f) Define attribute grammar.

g) List the formal methods of describing syntax.

h) List out design issues of arrays.

i) What data types were parts of original LISP?

j) What is type inferencing used in ML?

k) What is type compatibility?

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.

$$3 \times 16 = 48 \text{ M}$$

2. a) Describe the classification of programming languages. 8 M

   b) Explain the reasons for studying programming languages.
   8 M

3. a) Explain about the scanning and parsing phases of
      compilation with examples.   8 M

   b) Discuss about the syntax graph and EBNF descriptions of
      Ada if statement.   8 M

4. a) Write about type checking. Give examples.   8 M

   b) What is meant by primitive data types? Explain them with
      examples.   8 M

5. a) Write brief note on short circuit evaluation and coercion
      expressions with suitable examples.   8 M

   b) Describe three situations where a combined counting and
      logical looping statement is needed.   8 M

6. a) Differentiate between pass by reference and pass by name
      with suitable example.   8 M

   b) Discuss briefly about expressions in ML.   8 M