Code: 15A05504 **R15**

B.Tech III Year I Semester (R15) Regular Examinations November/December 2017

PRINCIPLES OF PROGRAMMING LANGUAGES

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Explain aliasing.
(b) What is a generic unit?
(c) What is an imperative language?
(d) What is an attribute grammar?
(e) What is checked exception in Java?
(f) What are the different types of recursion?
(g) What is type inference?
(h) Define virtual machine.
(i) What is an existential query?
(j) Explain multiple selection constructor.

PART – B

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

UNIT – I

2 Explain with an example, how weakest precondition for a logical pre-test loop is derived.

OR

3 List out main features of programming paradigm with examples.

UNIT – II

4 What is meant by type checking? Distinguish between static type checking and dynamic type checking.

OR

5 List out mixed mode assignments allowed in C and Java.

UNIT – III

6 What is attribute grammar? How attribute grammar is used for evaluation of expressions with an example?

OR

7 Discuss about various attributes of a good language and explain the process of evaluating attributes with example.

UNIT – IV

8 Explain how information hiding is provided in ADA package.

OR

9 How to implement generic functions in C++?

UNIT – V

10 Write a LISP function that evaluates n^{th} Fibonacci number.

OR

11 What is a logic programming? What is the difference between functional programming and logic programming?

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