Code No: 09A50501 **R09**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech III Year I Semester Examinations, November/December-2013
PRINCIPLES OF PROGRAMMING LANGUAGES
(Computer Science Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1.a) Explain the areas of computer applications and their associated languages.
b) Draw and explain the layered interface of virtual computers provided by a typical computer system. [15]

2.a) Explain the syntax graph and EBNF descriptions of the Ada if statement.
b) Explain the attribute grammer and also write the attribute grammer for simple assignment statements. [15]

3.a) What is the general problem with static scoping.
b) Distinguish between explain and implicit heap dynamic variables.
c) Differentiate between Ada derived type and an Ada subtype. Give examples. [15]

4.a) How does C support relational and boolean expressions?
b) Explain the problems with unconditional branching.
c) Differentiate the for statement between the C, C++ and Java. [15]

5.a) Explain the generic functions in C++ with examples.
b) Explain the design issues of subprograms and operations. [15]

6.a) Explain the abstract data types in C++.
b) Explain about the concurrency in Ada 95. [15]

7.a) Explain how exceptions are handled in Ada.
b) What is the relationship between resolution and unification in prolog?
c) What are the applications of logic programming? [15]

8.a) Explain about the LISP, ML.
b) Compare the functional programming languages with imperative languages. [15]

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