$\mathbf{R07}$

II B.Tech II Semester Examinations, April/May 2012 PRINCIPLES OF PROGRAMMING LANGUAGES Computer Science And Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions All Questions carry equal marks ****

- 1. (a) What type checking is done in Smalltalk? When does it take place?
 - (b) Explain the use of virtual method.
 - (c) In what way do overriding methods in C# syntactically differ from their counterparts in C++? [6+5+5]
- 2. (a) Define left recursive grammar rule.
 - (b) Distinguish between static and dynamic semantics.
 - (c) What is primary use of attribute grammars? [4+8+4]
- 3. (a) With a suitable example, explain the parameter passing in C++, Ada and C#
 - (b) Explain type checking for parameters. [8+8]
- 4. (a) What are the compound propositions? Explain.
 - (b) Explain the basic concept of declarative statements. [8+8]
- 5. (a) State the applications of functional languages.
 - (b) Explain about LIST comprehensions in Haskell. [8+8]
- 6. (a) Compare the string manipulation capabilities of the class libraries of C++ and Java.
 - (b) Explain why are the pointers of most languages restricted to pointing at a single type object. [8+8]
- 7. (a) Discuss the design issues for Arithmetic Expressions.
 - (b) Explain about the various language rules that specify the order of evaluation of operations. [8+8]
- 8. (a) What are the language that are used orthogonality as a primary design criterion? Discuss.
 - (b) Discuss the readability problem which is caused by using the same closing reserved control statements in languages that lack them. [8+8]

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