Code No: T0521                          $\boxed{\textbf{R07}}$                          $\boxed{\text{SET - 1}}$

**II B. Tech II Semester, Supplementary Examinations, Dec – 2012**
**PRINCIPLES OF PROGRAMMIG LANGUAGE**
(Computer Science and Engineering)

Time: 3 hours                                                                          Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1.  a) What are the reasons for studying programming languages? Explain

    b) Differentiate between object oriented programming and functional programming. (8M+8M)

2.  Explain about different methods for describing syntax with examples. (16M)

3.  a) Explain about user defined data types.

    b) Discuss about type compatibility with examples. (8M+8M)

4.  a) Explain about selection statements in c and python.

    b) Explain about for statement in c, ada and python. (8M+8M)

5.  a) In what ways are co-routines different from conventional subprograms? Explain.

    b) What two languages allow multiple values to be returned from a function? Explain.

    c) In what fundamental ways do the generic parameters to a Java 5.0 generic method differ from those of C++ methods? Explain. (6M+5M+5M)

6.  Explain about parameterized data types in Ada, c++, java, c# (16M)

7.  a) What is meant by exception? Explain about the design issues of exception handling.

    b) Explain about the basic elements of prolog. (6M+10M)

8.  Explain about the following terms

    a) Haskell

    b) ML

    c) Control flow in LISP (6M+5M+5M)

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Code No: T0521      $\left(\text{ R07 }\right)$      $\left(\text{ SET - 2 }\right)$

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Time: 3 hours            Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. Explain about different programming paradigm's with examples. (16M)

2. What is meant by semantic? Discuss about different semantics for common programming language features. (16M)

3. a) What is meant by pointer? Explain with examples in c , c++ and ada.
   b) Discuss about strong typing? (10M+6M)

4. a) Explain about the assignment statements and also explain with example using c language.
   b) Discuss about Boolean expressions. (8M+8M)

5. a) What are two fundamental design considerations for parameter-passing methods? Explain
   b) Describe the problem of passing multidimensioned arrays as parameters. (8M+8M)

6. Explain about encapsulation in c, c++, ada, c# languages. (16M)

7. Explain about Exception handling in c++. (16M)

8. Explain about the following terms
   i) F#
   ii) Functions in LISP
   iii) List functions in LISP (6M+5M+5M)

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(Computer Science and Engineering)

Time: 3 hours                                                                                    Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1.  a) Explain about different criteria's for language evaluation.
    b) Discuss about virtual machines.                                              (8M+8M)

2.  a) Explain about EBNF notation.
    b) What is meant by ambiguous grammar? Discuss.                        (8M+8M)

3.  a) Differentiate between structure and union and also discuss about their syntax's in c and Cobol language.
    b) Explain about union types                                                 (10M+6M)

4.  Explain about the different control structures and also give examples in c and python.    (16M)

5.  a) What are the design issues for functions? explain
    b) What two languages allow multiple values to be returned from a function? Explain.
    c) What is an overloaded subprogram? Explain with example.              (6M+5M+5M)

6.  Explain about abstract data types in java and ruby with examples              (16M)

7.  Explain about Exception handling in java.                                      (16M)

8.  Explain about the following terms
    a) Functional composition in LISP
    b) Recursion in LISP
    c) Common LISP                                                               (6M+5M+5M)

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$\left(\textbf{R07}\right)$

$\left(\text{SET - 4}\right)$

**II B. Tech II Semester, Supplementary Examinations, Dec – 2012**
**PRINCIPLES OF PROGRAMMIG LANGUAGE**
(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 80

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1.  a) Discuss about different language categories.

    b) Explain about concepts of programming languages. (8M+8M)

2.  a) What is meant by BNF? Explain with examples.

    b) Discuss about attributed grammar. (8M+8M)

3.  Explain about different data types and their declarations in different languages. (16M)

4.  a) Discuss about unconditional statements.

    b) Discuss about arithmetic and relational operators. (6M+10M)

5.  a) Write a detailed comparison of the generic subprograms of Java 5.0 and C# 2005.

    b) What are the two issues that arise when subprogram names are parameters?

    c) What is parametric polymorphism? (6M+5M+5M)

6.  Explain about abstract data types in c and ada with examples (16M)

7.  Explain about Exception handling in Ada. (16M)

8.  Explain about the following terms

    i) LSIP interpreter

    ii) Predicate functions for symbolic atoms and lists

    iii) LET function (6M+5M+5M)

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