Roll No ....

CS 602

B.E. VI Semester

Examination, June 2014

Principles of Programming Languages

Time : Three Hours   *Maximum Marks : 70*

Note: Attempt all questions. All questions carry equal marks.

1. a) What are the different factors that influences the
       evolution of programming languages?   7

    b) What are the different components of the context free
       grammar used for programming language construction.
                                                               7

OR

2. a) Explain in detail different stages in language translation.
                                                               7

    b) Explain various syntactic elements of language with the
       help of examples.   7

3. a) Define pointer. Explain various design issues of pointer
       and pointers in c/c++.   7

    b) Explain the problem caused by uniform evaluation rule
       while evaluating an expression and the solution to the
       problem.   7

OR

4. a) What is sequence control? Explain various categories of
       sequence control.   7

    b) Explain the different categories of scalar type variables
       with their advantage and disadvantages.   7

1. a) What do you understand by coroutines? How do we
       achieve control transfer between coroutines?   7

    b) What is the difference between procedure and function?
       Explain with suitable example.   7

OR

2. a) What do you mean by referencing environment of sub
       program? Discuss its several components?   7

    b) Explain the following implementation models for
       parameter passing with an example.   7
       i) Pass -By-value   ii) Pass-By-value-Result
       iii) Pass-By-Reference   iv) Pass-By-Name

1. a) Explain different elements which require storage during
       program execution.   7

    b) Explain the concept of abstraction and encapsulation with
       suitable example.
                                                               7

OR

2. a) Explain Briefly: 7
       i) Garbage collection   ii) Semaphores

    b) What is concurrency? Discuss various categories of
       concurrency?   7

3. a) Explain the use of predicate calculus in logic
       programming.
                                                               7

    b) How functions are declared in functional programming
       language.   7

OR

4. Write short note :   14
    i)   Activation records
    ii) 4GL
    iii) Dangling pointers