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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
- 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

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5. 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

6. 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

7. a) Explain different elements which require storage during program execution. 7
b) Explain the concept of abstraction and encapsulation with suitable example. 7

OR

8. a) Explain Briefly: 7
i) Garbage collection ii) Semaphores
b) What is concurrency? Discuss various categories of concurrency? 7

9. a) Explain the use of predicate calculus in logic programming. 7
b) How functions are declared in functional programming language? 7

OR

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