

Code No: R22056

R10**SET - 1**

II B. Tech II Semester, Supplementary Examinations, Dec – 2012
PRINCIPLES OF PROGRAMMING LANGUAGE
(Com. to CSE, IT)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Differentiate between compilation and interpretation.  
b) Explain about context-free-grammars with examples. (5M+10M)
2. a) Explain about static scoping rule with examples.  
b) Describe about macro expansion in detail. (7M+8M)
3. a) What is meant by semantic? Explain about the semantic analyzer.  
b) Discuss about action routines. (8M+7M)
4. a) What is meant by recursion? Explain how recursion is done in C and COBOL languages.  
b) Explain about the unstructured flow of control in programming languages. (8M+7M)
5. Explain about different data types in different programming languages. (15M)
6. What are different parameter passing methods? Discuss with examples. (15M)
7. a) Explain about object oriented programming? How it is different from functional programming?  
b) Summarize the fundamental arguments for dynamics method binding. (9M+6M)
8. Explain about the following terms  
a) Meta Language  
b) Logic programming  
c) Prolog (5M+5M+5M)

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**R10****SET - 2**

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1. a) What is the need of studying the programming languages? Explain.
b) Explain about the regular expressions with examples. (6M+9M)
2. a) Explain about the scope rules and discuss about implementing scope.
b) Discuss about the storage management. (6M+9M)
3. a) Explain about the role of semantic analyzer.
b) What is meant by attributed grammar? Explain. (6M+9M)
4. a) Explain about structured flow analysis.
b) Explain about non determinacy. (10M+5M)
5. a) What is meant by pointers? How pointers are represented and accessed in C, C++, Java languages.
b) Differentiate between structure and union data types. (10M+5M)
6. Discuss about the concurrency control with examples. (15M)
7. Which language does not have a feature of multiple inheritance? How it will be compensated? Explain with examples. (15M)
8. a) Give properties of functional programming and logical programming in detail.
b) Explain about assignment expressions with examples in scheme. (8M+7M)

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R10**SET - 3**

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1. a) Explain about scanning process in compilation  
b) Discuss about the programming environment in detail (5M+10M)
  
2. a) Explain about scope rules?  
b) Write a program to find whether the given number is armstrong or not and also explain about scope of each variable in it. (5M+10M)
  
3. a) How space management is done for attributes? Explain.  
b) How to evaluate attributes? Explain. (8M+7M)
  
4. Explain about different iterative flows in C, python, C++ and java languages. (15M)
  
5. a) What is meant by type checking? Explain.  
b) Discuss arrays, sets and strings data types in different programming languages. (6M+9M)
  
6. a) Explain about genetic subroutines and modules.  
b) Explain about the message passing mechanism. (8M+7M)
  
7. Explain about dynamic method binding with examples. (15M)
  
8. Explain about the following  
a) Resolution in logic programming  
b) Backward chaining in PROLOG.  
c) Assert usage in PROLOG. (5M+5M+5M)

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**R10****SET - 4****II B. Tech II Semester, Supplementary Examinations, Dec – 2012****PRINCIPLES OF PROGRAMMING LANGUAGE**

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Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions  
All Questions carry **Equal** Marks

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1. a) Explain in detail about different language evaluation criteria and the characteristics that affect them
b) Explain about top down and bottom up parsers. (5M+10M)
2. a) Explain about the object life time, binding time, scope terms.
b) What is meant by Macro? Explain about the Macro Expansion. (6M+9M)
3. a) What is meant by syntax tree? Explain.
b) Explain about action routines in detail (7M+8M)
4. a) Explain about the selection flows in C, Ada, and C# languages.
b) Discuss about the sequence flows. (10M+5M)
5. a) Explain about records and lists and also give examples in C and Java.
b) Discuss about equality testing and assignment with examples (10M+5M)
6. a) How exception handling is done in java? Explain with example.
b) What are primary problems with using semaphores to provide synchronization (5M+10M)
7. a) What are different types of inheritances? Explain. (15M)
b) Explain about data abstraction and encapsulation
8. Explain about
i) Horn clause
ii) Usage of assert
iii) Higher order functions (5M+5M+5M)