

Roll No. ....

Total Pages : 3

CMCA/M-20

10526

PRINCIPLES OF PROGRAMMING  
LANGUAGES

Paper–MCA-16-23

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt five questions in all, selecting at least one question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following questions in brief :
  - (a) What is the difference between left recursive and right recursive regular grammar?
  - (b) What is the difference between implicit and explicit type conversion?
  - (c) What is short circuit operation?
  - (d) What is an abstract class?

UNIT-I

2. (a) Write a detailed note on the effect of environment on the features of programming languages.

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- (b) What are the activities carried out during analysis phase of the program during compilation?  
Discuss.
3. What do you understand by parsing and parse tree? Differentiate between top-down and bottom-up parsing. Use suitable examples.

#### UNIT-II

4. What is the difference between FSA and PDA? Explain using suitable examples.
5. (a) Write the grammar to recognize the identifier in C language.
- (b) What are the merits and demerits of static and dynamic type checking? Explain.

#### UNIT-III

6. (a) What do you understand by polymorphism? Differentiate between runtime and compile time polymorphism.
- (b) How is the sequence control carried out within arithmetic expression? Explain.
7. (a) What is the difference between private and public members of a class? Explain.
- (b) What do you understand by implicit and explicit sequence control? Discuss.

#### UNIT-IV

8. (a) What is the difference between call by value and call by result parameter passing techniques?
- (b) What is the difference between HTML and XML? Discuss.
9. Write notes on the following :
- (a) Exception handlers.
- (b) Applets.

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