

Roll No. ....

Total Pages : 2

CMCA/M-22

24521

## PRINCIPLES OF PROGRAMMING LANGUAGES

Paper-MCA-20-24

Option-(i)

Time Allowed : 3 Hours]

[Maximum Marks : 75

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

### Compulsory Question

1. (a) What do you understand by imperative language paradigm?  
(b) Discuss ambiguous grammar using suitable examples.  
(c) Differentiate between name and structural equivalence.  
(d) What is an applet? Discuss.

### UNIT-I

2. (a) What are the quality attributes of a good programming language? Discuss.  
(b) What is the difference between parsing and scanning?
3. (a) Write a note on the effect of different environments on the features of programming languages?  
(b) Differentiate between compile time and run time binding.

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## UNIT-II

4. (a) What is explicit type declaration? Discuss its merits and demerits over implicit type declaration.
- (b) Differentiate between deterministic and non-deterministic finite state automata.
5. (a) What is the difference between narrowing and widening type conversion? Illustrate.
- (b) What is regular grammar? Give the regular grammar for all strings over  $\{0, 1\}$  containing the string 010.

## UNIT-III

6. (a) What is an abstract class? What is the need of declaring a class abstract.
- (b) What do you understand by associativity of operators? Illustrate.
7. (a) What do you understand by software reuse? How is it implemented in object oriented languages?
- (b) What do you understand by implicit sequence control? Explain.

## UNIT-IV

8. (a) What is the difference between call by value and call by result? Explain.
- (b) Write a brief note on xml.
9. (a) Illustrate the difference between static and dynamic scoping.
- (b) Write a note on scheduled subprogram.