Roll No. 18017984 Total Pages : 03

MCA/M-19 10503

PRINCIPLES OF PROGRAMMING LANGUAGES

MCA-14-23

Time : Three Hours] [Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory. In addition to that attempt *four* more questions, selecting exactly *one* questions from each Unit.

1. Explain the following terms in brief :

(a) Language syntax (b) Programming history

(c) Regular grammar (d) Data types

(e) Structured data type (f) Subprogram

(g) Distributed processing

(h) Processor design. **8×2=16**

Unit I

2. (a) Write a short note on role and characteristics of a good programming language. **8**

(b) Explain various types of binding in a programming language using suitable examples. **8**

3. (a) What is recursive decent parser ? Explain using suitable examples. 8

(b) How a program is analyzed ? Explain in detail. 8

Unit II

4. (a) What is meant by finite state automata ? Explain using suitable examples. 8

(b) Explain the concept of program validation and type promotion using suitable examples. 8

5. (a) Describe the concept of type checking and type conversion in various languages with suitable examples. 8

(b) What do you mean by Context free grammar ? Explain using appropriate examples. 8

Unit III

6. Explain following in detail : 16

(i) Inheritance (ii) Polymorphism

(iii) Software reuse (iv) Information hiding.

7. Explain various sequence control commands in detail using suitable examples. 16

Unit IV

8. Explain following in detail : 16

   (i) Parallel programming (ii) Network programming

   (iii) Coroutines (iv) Applet

9. (a) What is meant by exception ? How exception are handled ? Explain. 8

   (b) What is meant by storage management ? Explain static storage in detail. 8