Subject Code—2087

M.C.A. (Fifth Year) EXAMINATION

(5 Years Integrated Course)

MCA-501

PRINCIPLES OF PROGRAMMING LANGUAGE

Time : 3 Hours   *Maximum Marks :* 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) What do you mean by data types ? Discuss various data types.   **10**

    (b) What is Abstraction ? Discuss various types of abstraction.   **10**

2. (a) Define finite automata. Explain its types in detail.   **10**

    (b) Explain the Chomsky hierarchy of formal languages.   **10**

P.T.O.

3. (a) Differentiate between regular grammars and regular expressions. **10**

   (b) Explain the role of pushdown automata in the C.F.G. with example. **10**

4. (a) What are activation records ? Discuss various types of activation records. **10**

   (b) Explain the scope rule for parameter parsing. **10**

5. Discuss features of functional languages and aplications of functional languages with examples. **20**

6. What do you mean by object oriented languages ? Discuss various design issues for object oriented lang1ages. **20**

7. Write short notes on the following :

   (a) Implementation of formal logic system **10**

   (b) Manipulation of relational database using SQL. **10**

8. (a) What is Encapsulation ? Discuss its various types. **10**

   (b) Discuss the paradigm of multiple process. **10**