Programming Languages
Paper—CSE-204E

Time: Three Hours] [Maximum Marks: 100

Note:—Attempt FIVE questions picking at least ONE question from each unit. All questions carry equal marks.

UNIT—I

1. (a) Why programming languages are different from natural languages?

(b) What is type? What is type checking? Explain static and dynamic type checking.

(c) What are formal methods to represent program syntax?

2. (a) Differentiate between compiler and interpreter.

(b) Can pointer point to multiple types of objects? What are the challenges?

UNIT—II

3. (a) Do we need declarations? Explain importance of declaration.

(b) What are generic and overloaded subprograms?

4. (a) Explain concept of abstraction, encapsulation, inheritance and classes.

(b) Describe variable size data structures with examples.

UNIT—III

5. (a) What are exceptions? What are exception handlers? How do they work?

(b) Explain call by name, call by reference, call by value, and call by result.
6. (a) What is concurrency at subprogram level? How to do it?
    (b) What is scope? What are its types? Explain.

    UNIT—IV

7. (a) Differentiate between static and stack based storage management.
    (b) What are logic programming languages? How are they useful? Explain.

8. (a) What are phases in storage management? What are the problems with garbage/dangling references?
    (b) What are non-procedural languages? How are they different? Why are they there at first place?