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Roll No 0810CA22DD14

MCADD-502

M.C.A. (Integrated), V Semester

Examination, December 2024

Principles of Programming Language

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Discuss the two most important influences on the design of programming languages. 7
b) Explain the design and implementation issues for Abstract Data Types. 7
2. a) Describe the three general methods of implementing a programming language. 7
b) Explain the difficulties of translating from one language to another. 7
3. a) What is sequence control? Explain various categories of sequence control. 7
b) Explain the different components of the context free grammar used for programming language construction. 7
4. a) Define exceptions and explain exception handling with examples. 7
b) What do you understand about coroutines? How do we achieve control transfer between coroutines? 7

5. a) Explain the concept of abstraction and encapsulation with suitable example. 7
- b) How do you propagate exceptions in a method chain? Explain with an example. 7
6. a) What are the concepts of binding in PPL? Explain. 7
- b) Discuss the design issues for functions overloaded operators. 7
7. a) Explain storage management using heap. Also explain garbage collection. 7
- b) What is concurrency? Discuss various categories of concurrency. 7
8. a) Explain how functions are declared in functional programming languages with examples. 7
- b) Write short note: 7
- i) Semaphores
 - ii) 4GL
 - iii) Java Threads
