

Roll No.

Total Pages : 3

BT-3/D-18

33084

PROGRAMMING LANGUAGES

Paper : CSE-209(N)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt five questions in all by selecting at least one question from each unit. All questions carry equal marks.

UNIT-I

1. (a) What are the attributes of good programming language. Explain them in brief. 7½
(b) Which language translator is more efficient according to you and why ? Differentiate translator and interpreters. 7½
2. (a) Give regular expression for :
 - (i) Binary strings ending in 01. 10
 - (ii) Decimal integers divisible by 5. 10
 - (iii) C identifier. 5
 - (iv) Binary strings consisting of either an odd number of 1s or an odd number of 0s. 5(b) What do you mean by Pushdown automata ? Explain. 5

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UNIT-II

3. (a) Define structured data types. Describe the specification and implementation of structured data types in various languages. 7½
(b) What do you understand by vectors and arrays ? How can you handle vectors and arrays in various languages ? Explain. 7½
4. (a) Differentiate abstract data types and Generic abstract data types. Discuss the syntax and implementation of abstract data types. 7½
(b) Define generic and overloaded, subprogram to discuss the implementation of generic subprograms. 7½
5. (a) Differentiate implicit and explicit sequence control. Explain in detail how control the sequence in which the individual statements are executed with in a program. 8
(b) What are the problems in structured sequence control ? Explain them with example. 7
6. (a) What is bounded buffer problem ? How it can be solved through Synchronization ? Explain. 7½
(b) What do you understand by parameter transmission ? Explain the Methods of transmitting parameters. 7½

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2

UNIT-IV

7. Explain the features of functional and object oriented programming language. Also compare these languages on various counts. 15
8. (a) Differentiate static and dynamic storage management. Discuss various techniques of dynamic storage management with suitable example. 10
(b) Discuss the various features of C and C++ programming language. 5