

TCS-504

1279

Odd Semester Examination, 2017-18

B.TECH. (SEMESTER-V)

PRINCIPLE OF PROGRAMMING LANGUAGE

Time: 02:00 Hours

Max Marks : 50

1. Attempt any **Four**. All questions carry equal marks. [2.5×4]
- (a) What is programming language? What is the importance of programming language?
 - (b) What is object Oriented Programming Language? And comparison in various general and Special purpose Programming Language as Fortran, C, Pascal & Lisp etc.
 - (c) What is functional Programming? And give brief details.
 - (d) Discuss the various stages of translation clearly specifying the steps of lexical analysis, syntactic analysis & semantic analysis.
 - (e) Features in C allow the same meaning to be expressed in many ways. How many different statements can you write in C that adds 1 to a Variable X? Discuss the advantages & disadvantages of this aspect in the design of C.
2. Attempt any **Four**. All questions carry equal marks. [2.5×4]
- (a) What are the major factors that affect the development of a programming language?
 - (b) How do part arrays and variant records differ from conventional arrays and records?
 - (c) What is shared data? Explain inheritance with a programming example
 - (d) The major implementation problem associated with pointers and programmer constructed data objects that use pointer linkages is the storage allocation associated with the creation operation. Explain.
 - (e) What is an interpreter? And give brief on the basis of execution time and storage Requirements.

3. Attempt any Two. All questions carry equal marks. [5×2]
- (a) Give an account of any one of the methods that uses encapsulation.
 - (b) Give the accessing formula for computing the location of component $A[i][j]$ of a matrix A declared as $\text{int } A[m][n]$ where m and n are constants and A is stored in row major order.
 - (c) Explain specification and implementation of elementary data types.
4. Attempt any two. All questions carry equal marks. [10×2]
- (a) Distinguish between the implicit & explicit sequence control. Explain the sequence control of basic statements, compound statements and conditional statements with example.
 - (b) What is parameter passing? and Explain call by value and call by reference.
 - (c) Differentiate between data flow language and object oriented language.
