

Paper IV: Practical

Note : Students are required to perform all the experiments. In the examination two exercises selecting one from each part will be set.

Marks Distribution:

Part A: 24 Marks

Algorithm and flowchart: 8 Marks, Program coding: 8 Marks, Program execution, result and documentation: 8 Marks

Part B: 12 Marks

Program coding: 6 Marks, Program execution, result and documentation: 6 Marks

Part-C: 12 marks

Program coding : 6 Marks, Program execution, Result and Documentation: 6

Viva: 12 Marks

Record: 15 Marks

Part A: Data structure programming using C.

1. Programs using array-one dimensional , two dimensional.
2. Programs on matrix addition, subtraction, multiplication, transpose.
3. Programs on records, variant records, array of records.
4. Program to create a linked list using pointers write procedure to: insert cell in middle of list delete cell from middle of list printing elements of list.
5. Program for creations /maintaining binary search tree .Procedures to perform following operations on binary search tree.
 - (a) search an element
 - (b) insert an element
 - (c) delete an element
 - (d) print elements in pre order, post order, inorder form.
6. Programs for performing basic operations on stacks and queues .
7. Programs using procedure and functions (recursive and non recursive)
8. Programs on sorting array using
 - (a) selection sort
 - (b) insertion sort
 - (c) bubble sort
 - (d) quick sort
 - (e) heap sort

9. Program for searching an element in array using linear and binary search.
10. Simple file processing program on sequential file of records

Part-B

Database Management

1. Making queries using of SQL commands
2. Simple payroll Program
3. Simple Library management
4. Simple Inventory Control program
5. Result preparation program
6. Bus/Tour Ticketing program

PART-C: Assembly Language Programming for 8085 Microprocessor

1. Addition and subtraction of 8 bit numbers
2. Find 1's and 2's complement of 8 and 16 bit numbers
3. Shifting left/right of 8/16 bit numbers
4. Logical operation such as - masking and setting of specific bits
5. To find larger/smaller of two numbers
6. Sum of series of 8 bit numbers
7. To arrange a series of numbers in ascending/descending order
8. To multiply, divide two 8 bit numbers