Total No. of Printed Pages:02

SUBJECT CODE NO:- H-1361
FACULTY OF SCIENCE AND TECHNOLOGY
S.Y.B.Tech. (ETC) (Sem-III)
Data Structure
[Revised]

[Time: TWO Hours] **[Max.Marks:40]**

Please check whether you have got the right question paper.

N.B
i. Question number 1 and 5 are compulsory.
ii. Solve any two from remaining from each section.

Section A

Q.1 Solve any three from following

a) Define ordered list 02
b) Illustrate the term searching 02
c) Define LIFO 02
d) What is a persistent data structure? 02

Q.2 a) Explain the concept of binary search with example. 04

b) Consider a 18×5 two dimensional array marks, which has its base address =2000 and the size of an element = 2. Now compute the address of the elements, marks [16] [4]. Assuming that elements are stored in row major order. 03

Q.3 a) Define a bubble sort. Let us consider an array A[ ] has elements A [ ] = {32, 51, 25, 83, 68, 28, 15, 58}. Sort this array elements using bubble sort step by step. 04

b) Explain the concepts of static and dynamic data structure. 03

Q.4 Write short note on following 07

a) Sequential organization
b) Merge sort
c) ADT

Section B

Q.5 Solve any three from following

a) What is a node in linked list? Give example. 02
b) Define AVL. 02
c) How is array different from linked list? 02
d) Define complete binary tree 02

Q.6	a)	Explain the concept of circular queue. How it is better than a linear queue?	04
	b)	What are the key advantages and disadvantages of linked list?	03
Q.7	a)	Differentiate between B- tree and B+ tree.	03
	b)	Write a function to implement PUSH and POP operation on stack.	04
Q.8	Write short note on following		07

a) Binary search tree
b) Double linked list.
c) Array Implementation of Queue