Total No. of Printed Pages:02

SUBJECT CODE NO:- H-1370
FACULTY OF SCIENCE AND TECHNOLOGY
S.Y.B.Tech. (Electrical) (Sem-III)
Data Structure
[Revised]

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

Please check whether you have got the right question paper.

N.B
1. Question No.1 from section A and Question No. 6 are compulsory.
2. Attempt any two questions from remaining questions each from section A and section B.
3. Figure to the right indicate full marks.

Section A

Q.1 Attempt any THREE of the following. 06
a) Define Data structure.
b) Define Linear Data structure.
c) What is meant by sorting
d) Define data type and Abstract Data Type.
e) What is array?

Q.2 a) Sort the sequence 3, 1, 4,1,5,9,2,6,5 using Bubble sort. 04
b) Explain the operation and implementation of selection sort. 03

Q.3 a) Explain working of an array with example. 04
b) Compare different sorting Algorithms. 03

Q.4 a) Explain Abstract Data type. 04
b) Write a short note on primitive and non – primitive Data Structures. 03

Q.5 a) Write a program to implement bubble sort. 04
b) What is pointer variable? Explain with example. 03

Section B

Q.6 Attempt any Three of the following 06
a) Define binary tree.
b) What is Queue?
c) What is single linked list?
d) What are the initial values of top, front, rear?
e) Define degree of a tree.

Q.7 a) What is Graph? Explain with example. 04
b) Explain concept of linear data structure. 03

Q.8 a) Describe Binary search tree with example. 04

	b)	Write short note on different types of linked lists.	03
Q.9	a)	Write a program to implement stack using array.	04
	b)	Make a binary search tree for the following sequence of numbers. 45, 36, 76, 23, 89, 115, 98, 39 ,41, 56, 69, 48	03
Q.10	a)	Write a routine to insert an element in a linked list.	04
	b)	Explain working of Queue with example.	03