Total No. of Printed Pages:2

SUBJECT CODE NO:- H-1360
FACULTY OF SCIENCE AND TECHNOLOGY
S.Y.B.Tech. (ETC) (Sem-III)
Data Structure
[OLD]

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

Please check whether you have got the right question paper.

N.B i) Q.No.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 ADT. 02
b) What is the need for searching? 02
c) List out the area in which data structures are applied extensively. 02
d) What is stack? 02

Q.2 a) Explain the concept of sequential organization. 04
b) Explain Big oh, Theta and omega notation. 03

Q.3 a) Let use consider an array A[ ] that has the following elements : 04
A[ ]={30, 51, 28, 87, 62, 26, 15, 54}. Sort this array using the bubble sort. 03
b) Differentiate between linear and non-linear data structure.

Q.4 Write short note on following. 07
a) Data structure and its applications
b) Linear search with example
c) Sorting methods

Section B

Q.5 Solve any three from following.
a) What is Multiqueue? 02
b) Define leaf node. 02
c) What is singly linked list? 02
d) Define PUSH and POP operation. 02

Q.6 a) Explain the implementation of stack using array. 04
b) Describe the concept of Binary tree. 03

Q.7 a) List out and explain in detail types of linked list. 04
b) What do you understand by stack overflow and underflow conditions? Explain. 03

Q.8 Explain the terms. 07

a) Tree
b) Binary search tree
c) Queue as an ADT