

S.D.E.

M.C.A. Sem -II (Old Course) : SUMMER - 2019

SUBJECT : DATA STRUCTURES

Day : Thursday
Date : 02/05/2019

Time : 02.00 PM TO 05.00 PM
Max. Marks : 80

S-2019-5255

N.B.:

- 1) Attempt **ANY FIVE** questions from Section – I and attempt **ANY TWO** questions from Section – II.
- 2) Answers to both the sections should be written in **SAME** answer books.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- Q.1** What is ADT? Discuss implementation of queue as ADT. [10]
- Q.2** Explain time complexity with suitable example. [10]
- Q.3** What is Huffman code, how it is generated? [10]
- Q.4** What is searching? List and explain any two searching techniques. [10]
- Q.5** What is AVL tree? Explain rebalancing techniques. [10]
- Q.6** Explain Linked List. [10]
- Q.7** Write short note on **ANY TWO** of the following: [10]
- a) Stack
 - b) Binary Tree
 - c) Bubble Sort

SECTION – II

- Q.8** Write a program to convert infix expression to prefix expression. [15]
- Q.9** Write a program to insert and delete element from queue. [15]
- Q.10** Write an algorithm to sort a list of numbers using merge sort. [15]

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