S.D.E.

B.C.A. (2004 Course Sem- II : SUMMER - 2019

SUBJECT: C-PROGRAMMIGN & DATA STRUCTURES

Day: Saturday
Date: 04/05/2019

Time: 10.00 AM TO 1.00 PM
Max. Marks: 80

S-2019-4961

N.B.:

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

SECTION-I

Q.1 List various String handling functions in C. Explain any three functions. **(10)**

Q.2 What is *Structure* within *Structure*? What are advantages of using it? Give suitable examples. **(10)**

Q.3 What is Linked-List? How it is different than Arrays? Write a C function to insert element at the end of Linked-List. **(10)**

Q.4 What is Recursion? In which situation it should be used? Explain with suitable examples. **(10)**

Q.5 How File handling is performed in C? Explain File handling functions provided by C. **(10)**

Q.6 Write a C function to read a matrix. By using this function read two matrix and add them. **(10)**

Q.7 Write short notes on any **TWO** of the following: **(10)**

a) Pointers
b) Stack
c) Union

SECTION-II

Q.8 Write a C program to implement Queue. Write functions to implement insert and delete an element from queue. Declare Queue in *main* function and use it to carry operations using menu. **(15)**

Q.9 **a)** Define Tree. Explain representation of Binary Tree. **(08)**
b) Write a C function for DFS of a Tree. **(07)**

Q.10 Write a C program to store Employee details using structure like emp_id, name, designation and salary. Write functions to read and write data. Also write a function to display all managers. **(15)**

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