I.M.C.A. SEM–III (2014 Course) CBCS : SUMMER - 2019

SUBJECT: DATA STRUCTURES

Day : Thursday
Date : 02/05/2019

S-2019-2123

Time 02.00 PM TO 05.00 PM
Max. Marks : 100

N.B.:

1) Attempt any **FOUR** 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 Explain the Queue as data structure. Explain its any one application. **(15)**

Q.2 What is One-dimensional array? Write C program applying Binary search method to search an element in array. **(15)**

Q.3 Explain working of Stack. Explain recursion as application of stack. **(15)**

Q.4 Write a C program to sort a given list of integers using Bubble sort. **(15)**

Q.5 Discuss any one application of Queue. **(15)**

Q.6 Describe the working of Circular Linked list with neat diagram. **(15)**

Q.7 Write short notes on any **THREE** of the following: **(15)**

a) Atomic data with example
b) Depth First search
c) Infix and postfix arithmetic expression
d) Structure
e) Data types

SECTION-II

Q.8 Illustrate the process of in-order, Pre-order traversal in a binary tree. **(20)**

Q.9 Write a C program to accept two matrices and implement matrix multiplication. **(20)**

Q.10 Explain with neat diagram the operations on Doubly linked list. **(20)**

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