

S.D.E.

B.C.A. (2004 COURSE SEM- II : WINTER - 2017

SUBJECT: C PROGRAMMING & DATA STRUCTURES

Day: Thursday

Time: 02.00 PM TO 05.00 PM

Date: 14/12/2017

Max Marks: 80

W-2017-4155

---

**N.B:**

- 1) Attempt any **FIVE** questions from Section-I. Each carries **10** marks.
  - 2) Attempt any **TWO** questions from Section-II. Each carries **15** marks.
  - 3) Answer to both the sections should be written in the **SEPARATE** answer books.
- 

**SECTION-I**

- Q.1 Differentiate between Static memory allocation and Dynamic memory allocation. (10)
- Q.2 What is pointer? What do you mean by (&) address of and (\*) value at operator. Explain with example. (10)
- Q.3 Explain any 5 library functions of string with example. (10)
- Q.4 Write a program to accept n integers in an array and find average of them. (10)
- Q.5 What is pointer to function? How to declare pointer to function to add two integer variables and return the result. (10)
- Q.6 Discuss the following with example. (10)  
Binary search tree, Height of tree, Ancestors, Depth of tree, Strictly binary tree.
- Q.7 Write short notes on any **TWO** of the following: (10)
- a) Types of linked list
  - b) Recursion
  - c) Storage classes
  - d) BFS

**SECTION-II**

- Q.8 Explain data structure Stack. What are different operations performed on stack. (15)
- Q.9 Define structure of student having srno, sname, sdivision, smark1, smark2, stotal, sper, sgrade using this structure write a program to accept information of n students and display the students having division 'A'. (15)
- Q.10 Write program to accept information of book as bookno, bookname, bookauthor, bookprice, bookedition and store it in a file. (15)

\* \* \*