

LAB QUIZ - I

Design and Analysis of Algorithm

Max. Marks: 30

Duration: 3 Hrs

Note:

- Execute the programme in your computer and then write it in your copy.
- Submit the scanned version of your copy and your programme output where your name and roll number must be written in the output of programme.

Question 1: Write a programme C/C++/Java to print the numbers of Fibonacci series for a given range from 'm' to 'n'. **(10 Marks)**

[Example: If 'm' is 10 and 'n' is 50 then the displayed Fibonacci series will be: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34]

Question 2: Take a square matrix A[] of size nxn where 'n' is less than or equal to 10 and convert it into another square matrix B[] of nxn where matrix B[] should have following properties: **[10 Marks]**

- (i) Values of First row of matrix B[] should be ZERO.
- (ii) Values of Last Row of matrix B[] should be ZERO.
- (iii) Values of First column of matrix B[] should be ZERO.
- (iv) Values of Last Column of matrix B[] should be ZERO.
- (v) Values of Left Diagonal of matrix B[] should be ZERO.
- (vi) Values of Right Diagonal of matrix B[] should be ZERO.
- (vii) All other values of matrix B[] should be NON ZERO.

Further, display the matrix B[].

Question 3: Write a programme to merge two strings S1 and S2 as per following example where size of S1 is 'm', size of S2 is 'n' and size of S3 (merged string) is 'm+n': **[10 Marks]**

First String S1 = "ACGEJ"

Second String S2 = "DBFIH"

Merged String S3 = "ABCDEFGHIJ"