National Institute of Technology Calicut
Department of Computer Science and Engineering
CS3095D DBMS Lab

Time: 60 minutes **Test II** **8 Marks**

Submission II : B- tree
Set A

Part A
Answer all questions

1. Consider a B- tree of order 5 with elements 4, 6 and 22 as shown below. Insert elements 10, 2, 14, 3, 8, 40 and 11, in the same order. Explain each insertion step with crisp and clear explanations.

7*0.25=1.75

4	6	22

2. Consider the B-tree you have gotten after the insertions mentioned in Question 1. Delete elements 8, 10 and 22. Give a brief explanation for each deletion.

3*0.75=2.25

Part B

Note:- Use C/C++ for implementing the following question. Two test cases will be provided during the evaluation. Each test case carries 2 marks each.

Question: Implement a B- Tree, **of order 4**, which **uses characters as its key values**. The B- Tree should incorporate the following functionalities:

Insert – To insert a key value into the B- Tree

Search – To search for a key value in the B- Tree. If the key value is found, return TRUE. Else, return FALSE.

Print – To display the elements currently present in the B- Tree (**in-order traversal**)

(2 x 2 = 4 marks)