



End Semester Examination (February 2022)
Academic Year: 2021-2022

Max. Marks: 50 Class: Second Year B. Tech Computer Engineering Course: Data Structures Program: Second Year B. Tech Computer Engineering	Duration: 02 Hr. Semester: III-ODD Course Code: PCCO3020T DATE-17 FEB 2022
Instructions: (1) Solve ANY FIVE questions. (2) Read the questions carefully. (3) Assume suitable data wherever required, but justify it. (4) All questions carry equal marks. (5) Answer to each new question is to be started on a fresh page. (6) Figure to the right indicate full marks. (7) Draw the neat labelled diagrams wherever necessary.	

Question No.		Max. Marks
Q1 (a)	Demonstrate the working of Fibonacci search for any list having 6 elements.	05
Q1 (b)	Write a C program on Insertion Sort Algorithm.	05
Q2	Implement the following functions on single linked list. a. Insert a node. (All insert operations) b. Delete a node.	10
Q3 (a)	Write a C program to convert infix expression to postfix expression.	08
Q3 (b)	Explain any application of stack	02
Q4	Explain priority queue and implement priority queue in C.	10
Q5 (a)	Construct AVL Tree for the following numbers 14, 8, 12, 46, 23, 5, 77, 88, 20	06
Q5 (b)	Explain the expression tree with example.	04
Q6 (a)	Explain DFS and BFS algorithm with example.	05
Q6 (b)	What is hashing and what are different hashing functions	05

All the Best!