

Sr. No.....

Dec 2018

B.Tech III Semester

Data Structures using C (CE-201C)

Time: 3 Hours

Max. Marks: 75

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.
 4. Any other specific instructions

PART -A

- Q1 (a) What do you mean by data, information, record and file. (1.5)
- (b) Write advantages of Linked list over arrays (1.5)
- (c) Differentiate between static data structures and dynamic data structure. (1.5)
- (d) What do you mean by Dequeue? (1.5)
- (e) Discuss inorder traversal method of binary tree with the help of an example. (1.5)
- (f) What do you mean by hashing? Explain any one method. (1.5)
- (g) Find complexity of bubble sort. (1.5)
- (h) Explain how circular queue is better than Linear queue. (1.5)
- (i) Explain prefix, postfix and infix notation of expression with the help of (1.5) example.
- (j) Discuss method to tackle collision resolution in hashing. (1.5)

PART -B

- Q2 (a) Write an algorithm to sort elements using insertion sort. Give example also. (10)
- (b) Write an algorithm to search an element in an array using Linear Search (5)
- Q3 Write algorithm to insert, delete and search element in one way linked list. (15)
- Q4 Write a program to implement Queue. (15)
- Q5 (a) Write an algorithm to evaluate expression in postfix notation using Stack. (5)
- (b) Write an algorithm to search an element in Binary Search Tree. (10)
- Q6 Discuss various traversal techniques for Graph. Discuss with the help of (15) examples.
- Q7 Write short note on: (15)
1. AVL Tree
 2. Minimum Spanning Tree
 3. B Tree
