



UTTARAKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)

PGDCA 2nd SEMESTER ASSIGNMENT*Last Date of Submission: 15 May,2014***Course Title:** Data Structure through C Language**Course Code:** PGDCA-06**Year:** 2013-14**Maximum Marks:** 40 Marks

Section 'A' contains 08 short answer type questions of 5 marks each. Learners are required to answer 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

1. What is a spanning Tree?
2. What is the difference between a queue and a stack?
3. What are the limitations of arrays?
4. What is the difference between an array and a linked list?
5. Explain the procedure for insertion sort.
6. What is merge sort? Explain.
7. What is a graph? Define simple graph, directed graph, cyclic and acyclic graphs.
8. Define the term queue. List out all basic operations that can be performed in queue.

Section 'B' contains 04 long answer-type questions of 10 marks each. Learners are required to answer 02 questions only.

1. What do you mean by priority queues? Describe its applications.
2. What is a threaded binary tree? Explain with the help of example. What are its advantages?
3. Define data, information, algorithm and data structure. Give the difference between linear and nonlinear data structure with example.
4. Explain the difference between linear and non-linear Data Structures.