**Post Graduate Govt. College for Girls, Sector-42, Chandigarh**

**Teaching Plan (Odd Semester) Session (2019-2020)**

**Class: BCA II**   **Name of the Teacher: Ms. Anu Chawla**

**Subject: Data Structures Period: Mon- Thur( Lecture 2)**

**Paper: BCA -16-305 Room No: 201**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 23-07-2019 to 27-07-2019 | Basic Concepts: Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure |
| Week 2 | 29-07-2019 to 03-08-2019 | Basic data Structures.  Arrays: Introduction, Types of Array, Memory representation, Applications |
| Week 3 | 05-08-2019 to 10-08-2019 | Array: operations. |
| Week 4 | 13-08-2019 to 17-08-2019 | Searching : Binary and Linear Search;  Sorting: Bubble sort |
| Week 5 | 19-08-2019 to 24-08-2019 | Stacks: Introduction, memory representation, Applications |
| Week 6 | 26-08-2019 to 31-08-2019 | Stacks: operations, Quick sort |
| Week 7 | 02-09-2019 to 07-09-2019 | Linked List : Operations:-traversing, searching, inserting |
| Week 8 | 09-09-2019 to 14-09-2019 | header linked list : deleting, operations |
| Week 9 | 16-09-2019 to 21-09-2019 | Queue : Introduction, Types |
| Week 10 | 23-09-2019 to 28-09-2019  (Youth Festival 24-09-2019 to 27-09-2019) | Queue : Memory Representation |
| Week 11 | 30-09-2019 to 05-10-2019 | Queue: Applications |
| **Mid Semester Exams** | | |
| Week 12 | 16-10-2019 to 19-10-2019 | Trees– Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, |
| Week 13 | 21-10-2019 to 26-10-2019 | Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree |
| Week 14 | 29-10-2019 to 02-11-2019 | Graphs: Introduction, Memory Representation, Graph Traversal (DFS and BFS) |
| Week 15 | 04-11-2019 to 09-11-2019 | Circular linked list, doubly linked list, memory representation, |
| Week 16 | 11-11-2019 to 16-11-2019 | Linked Lists: Applications, polynomial manipulation. |
| Week 17 | 18-11-2019 to 23-11-2019 | Insertion sort, Selection sort, Merge Sort  Comparison of various Searching and Sorting algorithms. |
| Week 18 | 25-11-2019 to 30-11-2019 | Revision |