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

**Teaching Plan (OddSemester) Session (2019-2020)**

**Class: BCA III (5th sem) Name of the Teacher: Ms. Nidhi Goyal**

**Subject: Discrete Mathematical Structure Period: 2nd Period**

**Paper: BCA-16-502 Room No: 205**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 23-07-2019 to 27-07-2019 | --- |
| Week 2 | 29-07-2019 to 03-08-2019 | Set Theory : Set Notation and Description, subset |
| Week 3 | 05-08-2019 to 10-08-2019 | Set Theory : basic set operations, Venn Diagrams |
| Week 4 | 13-08-2019 to 17-08-2019 | Set Theory : laws of set theory |
| Week 5 | 19-08-2019 to 24-08-2019 | Set Theory : partitions of sets, min sets, duality principle |
| Week 6 | 26-08-2019 to 31-08-2019 | Relations: basic definitions of relations, |
| Week 7 | 02-09-2019 to 07-09-2019 | Relations: types of relations |
| Week 8 | 09-09-2019to 14-09-2019 | Relations: graphics of relations, properties of relations |
| Week 9 | 16-09-2019 to 21-09-2019 | Functions: introduction, types of functions |
| Week 10 | 23-09-2019 to28-09-2019  (Youth Festival 24-09-2019 to 27-09-2019) | Functions: properties: injective |
| Week 11 | 30-09-2019 to 05-10-2019 | Functions: properties: surjective and bijective functions, compositions. Revision of syllabus and doubt sessions |
| Mid Semester Exams | | |
| Week 12 | 16-10-2019 to 19-10-2019 | Recurrence : Recurrence Relations and Recursive Algorithms |
| Week 13 | 21-10-2019 to 26-10-2019 | Linear-Recurrence Relations with Constant Coefficients; Homogeneous Solutions : Particular Solution, Total Solution, |
| Week 14 | 29-10-2019 to 02-11-2019 | Solution by the Method of Generating functions, Graph Theory : Graph and planar graphs – Basic Terminology, |
| Week 15 | 04-11-2019 to 09-11-2019 | Multi-graphs, Weighted Graphs, Paths and Circuits, Shortest Paths |
| Week 16 | 11-11-2019 to 16-11-2019 | Eulerian Paths and Circuits. Travelling Salesman Problem, Planar Graphs. |
| Week 17 | 18-11-2019 to 23-11-2019 | Automata Theory : Finite State Machines–Equivalent Machines, Finite State Machines as language Recognizers |
| Week 18 | 25-11-2019 to 30-11-2019 | Analysis of Algorithms - Time Complexity, Complexity of Problems. Revision of Syllabus |