**B.Sc. (Hons.) Computer Science III Semester (NEP)- 2024**

**Data Structures Planner – Dr Nidhi Arora**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No.** | **Topic** | **Reference** | **Contents** | **Plan** |
| 1 | Unit 1 - Growth of Functions, Recurrence Relations | [1]  [2] | Ch-4  4.1, 4.2: 4.2.1-4.2.5  Ch-4: 4.3, 4.4, 4.5 | September end - Mid October 2024  Class Test 2 |
| 2 | Unit 2 - Arrays, Linked Lists, Stacks, Queues, Deques | [1]  [1] | Ch-3: 3.1 (till page 114 – excluding tic-tac-toe)  3.2, 3.3, 3.4  ch-5: 5.1, 5.2, 5.3: 5.3.1-5.3.3 | August – 3rd week of September 2024 |
| 3 | Unit 3 - Recursion | [1] | ch-3: 3.5 upto page 135, 3.5.1, 3.5.2  ch-4: 4.2.6 | Last week of September 2024  Class Test 1 |
| 4 | \*Unit 4 - Trees, Binary trees, Binary Search Trees, Balanced Search Trees | [1]  OR  Additional Ref (iii) | ch-7: 7.1, 7.2, 7.3.1-7.3.4, 7.3.6 upto page 299  ch-10: 10.1, 10.2 upto 10.2.1 (10.2.2 to be covered for practicals only)  OR  6.1, 6.2, 6.3, 6.4 (upto 6.4.2; only recursive methods to be done in 6.4.2), 6.5 (excluding insertion into a threaded tree), 6.6 (excluding 6.6.1 – deletion by merging), 6.7 (except 6.7.1 – DSW algorithm) | October Mid – November Mid  Assignment 1  Practical Submissions  Practical Mock Viva |
| 5 | Unit 5 - Binary Heap | [2] | ch-6: 6.1-6.3 | November end  Practical File submission |