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| **Sl. No** | **Syllabus** | **Curriculum** | **Deployment Strategy and**  **Tool** | **Cross-cutting issues**  **integrated** | **PO, PSO and CO** | **Attainment Verification** |
| 1. | DISCRETE MATHEMATICAL STRUCTURES | * Concepts and notations from discrete mathematics are useful in studying and describing objects and problems in all branches of computer science, such as computer algorithms, programming languages, cryptography, automated theorem proving, and software development. * Discrete math can be used for software design specifications, analysis of algorithms, and other practical applications, but it's really a great tool to develop as a programmer. * The mathematics of modern computer science is built almost entirely on discrete math, in particular combinatorics and graph theory. This means that in order to learn the fundamental algorithms used by computer programmers, students will need a solid background in these subjects. | 1. Chalk and   Talk method   1. PPT | * Business   Ethics   * Human   values | PO1:Engineering Knowledge  PO2:Problem Analysis |  |
|  |  | PO4:Conduct Investigations Of Complex Problems |
|  |  | PO12: Life-long  Learning. |
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|  |  | CO1 Verify the correctness of an argument using propositional and predicate logic and truth tables.  CO2 Demonstrate the ability to solve problems using counting techniques and combinatorics in the context of discrete probability.  CO3 Solve problems involving recurrence relations and generating functions.  CO4 Construct proofs using direct proof, proof by contraposition, proof by contradiction, proof by cases, and mathematical induction.  CO5 Explain and differentiate graphs and trees |
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