**GOVERNMENT COLLEGE BAROTA GOHANA (SONIPAT)**

**Summary of Lesson Plans of College Faculty for Academic Session 2024 - 2025**

**Name of Assistant/Associate Professor:- Dr. Jyoti**

**Class:- BCA I From:- July 2024-Nov 2024**

**Subject:- Mathematical foundation of computer science Semester:- ODD Semester**

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| **Months** | **Week** | **Topics/ Chapters to be Covered** |
| **JULY** | **4th week** | **Sets: Sets, Subsets, Equal Sets Universal Sets and their Examples** |
| **AUGUST** | **1st week** | **Finite and Infinite Sets, Operation on Sets, Union, Intersection and their Examples** |
| **2nd week** | Complements of Sets, Cartesian Product, Cardinality of Set, Practical applications of set theory. |
| **3rd week** | **Relations And Functions: Properties of Relations, Equivalence Relation, Partial Order Relation.** |
| **4th week** | **Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions.** |
| **SEPTEMBER** | **1st week** | Trigonometry: Introduction, Measurement of angles, trigonometric functions, relation between trigonometric |
| **2nd week** | **signs of trigonometric functions, trigonometric functions of standard angles. Basic of inverse trigonometry.** |
| **3rd week** | Limits & Continuity: Limit at a Point, properties of limit, computation of limits of various types of functions, Continuity of a function at a point, Continuity over an interval. |
| **4th week** |  |
| **OCTOBER** | **1st week** | Limits & Continuity: Limit at a Point, properties of limit.Test of chapter 1 |
| **2nd week** | **computation of limits of various types of functions. Revision and Test of chapter 2** |
| **3rd week** | **Continuity of a function at a point, Continuity over and Revision of chapter 3 .** |
| **4th week** | Differentiation: Derivative of a function, Derivatives of sum, differences, product & quotient of functions, Derivatives of polynomial. |
| **NOVEMBER** | **1st week** | **Derivatives trigonometric, exponential, logarithmic, inverse trigonometric and implicit functions.** |
| **2nd week** | **Logarithmic Differentiation, Chain rule and differentiation by substitution** |
| **3rd week** | Matrices: Definition , Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices |