

# GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2023- 2024

Name of Assistant/Associate Professor: Nisha Rani

Class: B.Sc I Subject: Number theory & Trigonometry

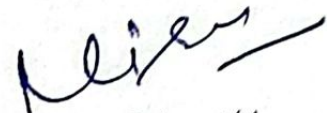
Semester: 2<sup>nd</sup> Semester

Months	Topics/Chapters to be Covered
January 2024	Divisibility, G.C.D, L.C.M. Primes.
	C.C.L (04.01.2024 -10 16.03.2024)
February 2024	
March 2024	Fundamental theorem of Arithmetic. Linear congruences, Fermat's theorem, Wilson's theorem & its converse. Linear Diophantine equations in two variables.
	Test & Assignment



April  
2024

De Moivre's Theorem & its Applications. Expansion of trigonometrical functions. Direct Circular & hyperbolic functions & their properties. Inverse circular & hyperbolic functions & their properties. Logarithm of a complex quantity. Gregory's Series. Summation of trigonometry Series. Complete residue system & reduced residue system mod  $m$ . Euler's  $\phi$  function. Euler's generalisation of Fermat's Thm. Chinese remainder theorem. Quadratic residues. Legendre symbols. Lemma of Gauss; Gauss reciprocity law. Greater Integer function. Number & sum of divisors of a natural no.  $n$ . Mobius function & Mobius Inversion formula.

  
Signature of Asst/Asso. Professor



# GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2023-2024

Name of Assistant/Associate Professor: Misha Rani

Class: B.Sc II Subject: Programming in C & Numerical Methods

Semester: 4th

Months	Topics/Chapters to be Covered
January 2024	Programmer's Model of a Computer, Algorithm, flow charts.  C.C.T (04.01.2024 to 16.03.2024)
February 2024	
March 2024	Data Types, operators & Expressions, Input/Output functions. Decision Control Structures: Decision statement, Logical & Conditional Statements, Implementation of Loops, Switch Statements & Case Control Structures. Functions Preprocessor & Arrays.  Test & Assignment



April  
2024

Solution of Algebraic & transcendental equations:  
 Bisection Method, Regula Falsi Method, Secant Method, Newton Raphson's Method, Newton's Iterative method for finding  $n^{\text{th}}$  root of a number, Order of convergence of above methods.  
 Simultaneous linear Algebraic equations:  
 Gauss elimination method, Gauss Jordan method, Triangularization Method (LU), Crout's Method, Cholesky decomposition method, Iterative method, Jacobi's Method, Gauss-Seidel's Method, Relaxation Method.

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 Signature of Asst/Asso. Professor



# GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2023- 2024

Name of Assistant/Associate Professor: Nisha Kani

Class: B.Sc III

Subject: Dynamics

Semester: 6<sup>th</sup>

Months	Topics/Chapters to be Covered
January 2024	Velocity & acceleration along Radial
	C.C.L. w.e.f. 04.01.2024
	to 16.03.2024.
February 2024	
March 2024	transverse, tangential & normal directions, Relative velocity & acceleration. Simple Harmonic Motion, Elastic String.
	Test & Assignments



April  
2024

Mass, Momentum & force, Newton's Laws of Motion, Work, Power & Energy. Definitions of conservative, forces & impulsive forces. Motion on smooth & rough plane curves. Projectile motion of a particle in a plane. Vector Angular velocity. General motion of a rigid body: Central orbits, Kepler's Laws of Motion, Motion of a particle in three dimensions. Acceleration in terms of different co-ordinate systems

Misra

Signature of Asst/Asso. Professor