Govt. College Mandi Hariya (Ch. Dadri)
Lesson Plan (2023-24 Odd sem.)

Name: Dr Yogita Godara
Designation Assistant Professor
Subject Mathematics
Class B.A. 2nd Sem. (Number Theory and Trigonometry (20UMTH201)

SN	Weeks	Topic
1	2nd week of february	Divisibility, Greatest common divisor, Least common multiple, Primes
2	3rd week of february	Fundamental theorem of Arithmetic. Linear congruencies
3	4th week of february	Fermat's theorem, Wilson's theorem and its converse,
4	1st week of March	Complete residue system and reduced residue system modulo m, Euler's Ø function and Euler's generalization of Fermat's theorem
5	2nd week of March	Chinese Remainder theorem, Quadratic residues,
6	3rd week of March	Legender symbol, Gauss's lemma
7	4th week of March	Holi Break (Assignments)
8	1st week of April	Gauss reciprocity law(Applications only), Greatest integer function, Divisor function(T(n)), Sum function (c(n)), Test
9	2nd week of April	De Moivre's theorem and its applications,. Expansion of trigonometric functions,
10	3rd week of April	Direct circular and hyperbolic functions and their properties and
11	4th week of April	Logarithm of a complex quantity, Gregory's series, Summation of trigonometric series.

Govt. College Mandi Hariya (Ch. Dadri)
Lesson Plan (2023-24 Even sem.)

Name: Dr Yogita Godara
Designation Assistant Professor
Subject Mathematics
Class B.A. 2nd Sem. (Vector Calculus)
(20UMTH202)

SN	Weeks	Topic
1	2nd week of february	Gradient of a scalar point function, Directional derivatives, geometrical interpretation of grad Φ, character of gradient as a point function.
2	3rd week of february	Divergence and curl of vector point function and their geometrical significance, characters of Div. f
3	4th week of february	Curl f as point function, examples. Gradient, divergence and curl of sums and product and their related vector identities. Laplacian operator.
4	1st week of March	Orthogonal curvilinear coordinates Conditions for orthogonality fundamental triad of mutually orthogonal unit vectors
5	2nd week of March	Gradient, Divergence, Curl and Laplacian operators in terms oforthogonal curvilinear coordinates, Cylindrical co-ordinates and Spherical co-ordinates.
6	3rd week of March	Vector integration; Line integral, Surface integral, Volume integral. Problems based on Theorems of Gauss, Green & Stokes.
7	4th week of March	Holi Break (Assignments)
8	1st week of April	Volume integral and Test
9	2nd week of April	Problems based on Theorems of Gauss, Green & Stokes.
10	3rd week of April	General equation of second degree, Tracing of conics.
11	4th week of April	Tangent at any point to the conic, chord of contact, pole of line to the conic, director circle of conic

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Lesson Plan (2023-24 Even sem.)

Name: Dr Yogita Godara
Designation Assistant Professor
Subject Mathematics
Class B.A. 4th Sem. (Mechanics)
(20UMTH401)

SN	Weeks	Topic
1	2nd week of february	Composition and resolution of forces.
2	3rd week of february	Parallel forces and exercise problems
3	4th week of february	Moments
4	1st week of March	Couples, Test
5	2nd week of March	.Analytical conditions of equilibrium of coplanar forces.
6	3rd week of March	Velocity and acceleration along radial, transverse, tangential and normal directions.
7	4th week of March	Holi break (assignments)
8	1st week of April	Relative velocity and acceleration
9	2nd week of April	Simple harmonic motion
10	3rd week of April	Elastic strings,.
11	4th week of April	Newton's laws of motion,Work, Power and Energy