GOVERNMENT COLLEGE BAROTA GOHANA (SONIPAT)

summary of Lesson Plans of College Faculty for Academic Session 2024 - 2025

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

Class:- BA/ B.Sc - 3 rd

From:- July 2024-Nov 2024

Subject:- Real Analysis

Semester:- ODD Semester

Months	Week	Topics/ Chapters to be Covered
JULY	4th week	Bounded set, Least upper bound, Greatest lower bound, Partitio partition, Refinement of partition
AUGUST	1st week	Upper Sum and Lower Sum, Oscillatory Sum, Lower Riemann integra Riemann integral,
	2nd week	Example of Riemann integral, Example of Non Riemann integr Application of Darboux's Theorem
	3rd week	Example of Non Riemann integral , Darboux's Theorem, A Theorem
	4th week	1. Theorems on Condition of Integrabililty, Integrabililty of continuous an
SEPTEMBER	1st week	Integral as a limit of sums, Riemann Sum, Integral as a Riemann theorem of integral calculus. Application and example of the F integral calculus
	2nd week	2. Mean value theorems of integral calculus, Application and example o integral calculus
	3rd week	Generalized Mean value theorems of integral calculus, Appl Generalized Mean value theorems of integral calculus
	4th week	Application & example of Improper integrals & their convergen check convergence of Improper integrals. Assignments: Based o
OCTOBER	1st week	An important Comparison integrals, Application and example o integrals, General test for convergence, Absolute convergenc convergence at infinity
	2nd week	3. Abel's and Dirichlet's tests, Frullani's integral, Application and example o tests, Application and example Frullani's integral. Assignments: Based Integral
	3rd week	4. Integral as a function of a parameter, Application and example of I parameter. Continuity, Application and example of Continuity

	4th week	5. Application and example of Differentiability and integrability of an int parameter. Definition and examples of metric spaces, Application a spaces. Assignment & test on Unit 2
		6.
NOVEMBER	1st week	7. Neighborhoods, limit points, Interior points, Application and examp limit points, interior points. Open and Closed sets, Closure and Inte Application and example of Open and Closed sets, Closure and In Points. Test of unit 3
	2nd week	subspace of a Metric space, Equivalent metrics, Application and a metric space and equivalent metrics. Assignment of metric Cauchy sequences, Completeness, Application & example o completeness, Cantor's intersection theorem, Baire's categor Principle, Application & example of Cantor's intersection theoren
	3rd week	8. Continuous functions, uniform continuity, compactness for m compactness, Bolzano-Weierstrass property, total boundedness, fi continuity in relation with compactness, connectedness, components, connectedness.