CMG Govt. College for Women, Bhodia Khera (Fatehabad)
Lesson Plan 2022-23

Name of Asstt./Associate: Mr. Sonu Ram

Class and Section: BA/BSC-III, 5th semester.

Subject- Mathematics (Real Analysis)

Month	Week	Topics
August	3rd and 4th	Improper integral and their convergence, comparison test, Abel's and Dirichlet test, Frullani. taking doubts. Revision.
September	1st and 2nd	Integral, integral as function of a parameter. Continuity, differentiability. Integrability of an integral of a function of parameter. Taking doubts. Revision.
September	3rd and 4th	Definition and example of metric spaces, neighborhood of a point, limit point in matric spaces, interior points in metric spaces, open and closed sets in metric spaces. Taking doubts. Revision. Take 1st assignment.
October	1st and 2nd	Subspaces of metric spaces, examples of subspaces of metric spaces, closure point of metric spaces, Taking doubts. Revision.
October	3rd and 4th	Equivalent metric spaces, Cauchy sequence in metric spaces, convergent sequences in metric spaces, boundary points, Taking doubts. Revision. Take 2nd assignment
November	1st and 2nd	Completeness of sequences in metric space, cantor intersection theorem, Bares category theorem, contraction theorem. Taking doubts. Revision.
	3rd and 4th	Continuous function in metric spaces, uniform continuous, compactness in metric spaces, sequential compactness in metric spaces, example of sequential compact metric spaces, Taking doubts. Revision.
		Bolzano-Weierstrass property, example of metric spaces those have Bolzano-Weierstrass property, total bound ness property, example of total boundness property, metric spaces example which is not total bounded. Taking doubts. Revision.
December	1st and 2nd	Finite intersection property, example of metrics spaces which do not have finite intersection property. Taking doubts of finite intersection property, Taking doubts. Revision. Take test
		Continuity in relation in with compactness in metric spaces, connectedness, components, continuity in relation with connectedness. Taking doubts regarding connectedness in metric spaces. Taking doubts. Revision.