Odd Semester Lesson Plan

Subject : Mathematics

Teacher name: Sujata , Paper 1 Semester 5th

October 2020

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| Riemann integral, Integrabililty of continuous and monotonic functions, The Fundamental theorem of integral calculus. Mean value theorems of integral calculus. |

November 2020

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| Improper integrals and their convergence, Comparison tests, Abel’s and Dirichlet’s tests, Frullani’s integral, Integral as a function of a parameter. Continuity, Differentiability and integrability of an integral of a function of a parameter. |

December 2020

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| Definition and examples of metric spaces, neighborhoods, limit points, interior points, open and closed sets, closure and interior, open and closed sets, closure and interior, boundary points, subspace of a metric space, equivalent metrics, Cauchy sequences, completeness, Cantor’s intersection theorem, Baire’s category theorem, contraction Principle. |

January2021

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| Continuous functions, uniform continuity, compactness for metric spaces, sequential compactness, Bolzano-Weierstrass property, total boundedness, finite intersection property, |

February 2021

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| Continuity in relation with compactness, connectedness , components, continuity in relation with connectedness. |