Odd Semester Lesson Plan

Subject : Mathematics

Teacher name: Sujata, Paper 1 Semester 3rd

October 2020

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| Continuity, Sequential Continuity, properties of continuous functions, Uniform continuity, chain rule of differentiability. Mean value theorems; Rolle’s Theorem and Lagrange’s mean value theorem and their geometrical interpretations. Taylor’s Theorem with various forms of remainders, Darboux intermediate value theorem for derivatives, Indeterminate forms. |

November 2020

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| Limit and continuity of real valued functions of two variables. Partial differentiation. Total Differentials; Composite functions & implicit functions. Change of variables. Homogenous functions & Euler’s theorem on homogeneous functions. Taylor’s theorem for functions of two variables. |

December 2020

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| Differentiability of real valued functions of two variables. Schwarz and Young’s theorem. Implicit function theorem. Maxima, Minima and saddle points of two variables. Lagrange’s method of multipliers. |

January2021

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| Curves: Tangents, Principal normals, Binormals, Serret-Frenet formulae. Locus of the centre of curvature, Spherical curvature |

February 2021

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| Locus of centre of Spherical curvature, Involutes, evolutes, Bertrand Curves. Surfaces: Tangent planes, one parameter family of surfaces, Envelopes |