Subject : Mathematics

Teacher name: Sujata, Paper 3 Semester 2nd

April 2021

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| Scalar and vector product of three vectors, product of four vectors. Reciprocal vectors. Vector differentiation Scalar Valued point functions, vector valued point functions, derivative along a curve, directional derivatives |

May 2021

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| Gradient of a scalar point function, geometrical interpretation of grad f, character of gradient as a point function. Divergence and curl of vector point function, characters of div f, curl f , laplacian operator, Gradient, divergence and curl of sums and product and their related vector identities |

June 2021

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| Orthogonal curvilinear coordinates Conditions for orthogonality fundamental triad of mutually orthogonal unit vectors. Gradient, Divergence, Curl and Laplacian operators in terms of orthogonal curvilinear coordinates, Cylindrical co-ordinates and Spherical co- ordinates. |

July 2021

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| Vector integration; Line integral, Surface integral, Volume integral Theorems of Gauss, Green & Stokes and problems based on these theorms. |