



ON SUMUDU TRANSFORM AND GENERAL INTEGRO QUASI-DIFFERENTIAL EQUATIONS

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Abstract

In this paper, we have considered the problem that all solutions of the general integro quasi-differential equation

$$[\tau - \lambda I]y(t) = wF(t, y, S(y))$$

are bounded and L_w^2 -bounded on $[0, b)$ under suitable conditions on the integrand function F , where τ is a general quasi-differential expression of order n with complex coefficients and $S(y)$ is the Sumudu transform of the function y .

Keywords and phrases: quasi-differential expressions, regular and singular endpoints, integro quasi-differential equations, solutions, boundedness of solutions, Sumudu transform of the function.

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