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EXISTENCE OF UPPER SOLUTION OF FIE INVOLVING GENERALIZED MITTAG-LEFFLER FUNCTION

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Abstract: In this paper, we will extend to prove the existence of maximal solution of quadratic fractional integral equation involving the generalized Mittag-Leffler function and this maximal solution will serve as an upper bound for the solution and this solution we got with the help of approximation of the integral equation by sequence of solution converging to this.

Keywords and Phrases: Quadratic fractional integral equation, Fractional derivatives and Integrals, Approximate solution.

2020 Mathematics Subject Classification: 26A33, 31A10, 81Q05.

1. Introduction

Quadratic integral equations was investigated by many authors since long time because of their useful applications in describing numerous events and problems of the real world. Initial studies by Chandrasekhar [11, 12] form only a beginning for this theory, mainly made by astrophysicists. After observing the occurrence in the problems of some natural and physical processes of the universe, for example in the theory of radiative transfer, kinetic theory of gases, in the theory of neutron transport and in the traffic theory, Especially, the so-called quadratic integral