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SOME DEFINITE INTEGRALS INVOLVING HYPERGEOMETRIC AND GAMMA FUNCTIONS

M. P. Chaudhary, Salahuddin* and Sabahat Parveen**

International Scientific Research and Welfare Organization (Albert Einstein Chair Professor of Mathematical Sciences)
New Delhi 110018, INDIA

E-mail: dr.m.p.chaudhary@gmail.com

*Department of Mathematics, AMET University, Chennai, Tamil Nadu, INDIA

E-mail: vsludn@gmail.com

**Department of Mathematics, Maharashtra College of Arts, Science and Commerce, Mumbai, Maharashtra, INDIA

E-mail: siansarii@gmail.com

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Abstract: In this article, the authors make use of the Gamma function as well as the hypergeometric functions in order to investigate and develop five definite integrals involving the elliptic integrals. The numerical approximation of these definite integrals and the corresponding hypergeometric functions are also presented. The results derived in this article are believed to be new and extend and unify those that are available in the scientific literature.

Keywords and Phrases: Bessel Function, Meijer G-function.

2020 Mathematics Subject Classification: 33B50, 33D50, 33D60, 33D67.

1. Introduction

Recently Chaudhary gave a simple solution of some integrals given by Srinivasa Ramanujan [2]; and Chaudhary et al. studied about definite integrals [5], hyperge