J. of Ramanujan Society of Mathematics and Mathematical Sciences
Vol. 9, No. 2 (2022), pp. 217-234

ISSN (Online): 2582-5461

ISSN (Print): 2319-1023

STRESS-STRENGTH RELIABILITY MODELS INVOLVING H-FUNCTION DISTRIBUTIONS

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(**Received:** *Feb. 25, 2022* **Accepted:** *Jun. 01, 2022* **Published:** *Jun. 30, 2022)*

Abstract: This paper deals with four theorems for the stress-strength reliability measure $R = P(Y < X)$, when X and Y are independent H-function random variables with different parameters. Several new particular cases of the general results are given along with known results in the literature. For ready reference, the results are given in tabular form.

Keywords and Phrases: Stress-strength reliability, $P(X < Y)$ and H-function.

2020 Mathematics Subject Classification: 60E05, 62N05.

1. Introduction

The stress-strength probability plays an important role in the reliability theory. If Y is the strength of a system which is subjected to a stress X, then $R = P(X <$