STRONG COMMENSALISM WITH MONAD MODEL - A SCIENTIFIC STUDY

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Abstract: In this paper, Strong Commensalism with Monad model is discussed. This model is formed by a couple of first order non linear differential equations with Monad coefficient. The stability and the characteristic behaviors of two species are established with the impact of Monad Parameter. Phase plane analysis has been used to investigate this model.

Keywords and Phrases: Commensal species, Host Species, Equilibrium points, Stability and Phase Plane analysis.

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1. Introduction and Preliminaries

Ecology is one of the scientific fields of population dynamics to determine the implications and to provide suitable solutions to the ecological models. In this connection, mathematical modeling plays wonderful role to fulfill our dreams to get the effective solutions in the complicated situations. Many scholars like Lotka [10], Volterra [13], Meyer [11], Cushing [6], Gause [7], Paul Colinvaux [12], Haberman