

PREDICTION OF THE POPULATION OF BANGLADESH, USING LOGISTIC MODEL

MD. ASRAFUL ISLAM & PAYER AHMED

Department of Mathematics, Jagannath University, Dhaka, Bangladesh

ABSTRACT

In this paper, we have discussed logistic mathematical model, to analyze the population problems of Bangladesh. We have also discussed analytic solution, geometrical analysis, stability and local linearization of the logistic growth model. We analyzed the logistic model, both analytically and numerically. Several census data are analyzed for some countries, including Bangladesh. We have analyzed the population growth of Bangladesh, for a certain period of time (1971-2011). Finally, we implement the logistic model, that gives the future population of Bangladesh during (2012-2050).

KEYWORDS: Analytic Solution, Carrying Capacity, Equilibrium Point, Geometrical Analysis, Logistic Population Model, Local Linearization, Stability