Mathematical modelling of infectious diseases is the research work that focuses on the population dynamics of infectious diseases. Here, the work starts with basics of the epidemic modelling. The models are formulated for various infectious diseases like malaria, HIV, TB, influenza, typhoid etc. Bifurcation analysis is done for each model in order to identify the most crucial parameters responsible for the disease spread. The work is carried out under the guidance of Prof. (Dr.) Nita H. Shah, Gujarat University.

Jyoti Gupta is an independent researcher in Mathematics. She received her M. Phil degree in Regular Polytopes and Ph. D. in Mathematical Modelling of Infectious Diseases from Gujarat University. She is currently engaged in research area of mathematical modelling of vaccination for endemic diseases and mathematics of natural disasters.

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