Assignment 5

1. Consider a game of 3 strategies ALLC, ALLD and TFT for expected number of rounds (i)m=3, (ii)m=6. Start from an initial condition where the fraction of each strategy is (a) 1/3 in the population (b) initial fraction of ALLD, ALLC and TFT are 0.2,0.2 and 0.6 respectively.

Solve the replicator equations for this 3-strategy game and plot the frequency vs. time graph for each strategy in each of these cases.

2. Consider a game of 4 strategies GTFT, ALLD, TFT and WSLS. Start from an initial condition where the fraction of each strategy in the population is 0.333, 0.333, 0.333 in a game of 3 of the 4 strategies.

Solve the replicator equations for the following 3-strategy games and plot the frequency vs. time graph for each strategy in each of these cases.

(a) WSLS vs ALLD vs TFT (b) WSLS vs ALLD vs GTFT

Use a=3,b=0,c=5,d=1 for the parameters of the payoff matrix in the standard PD game.

Submission Deadline: February 21, 2019