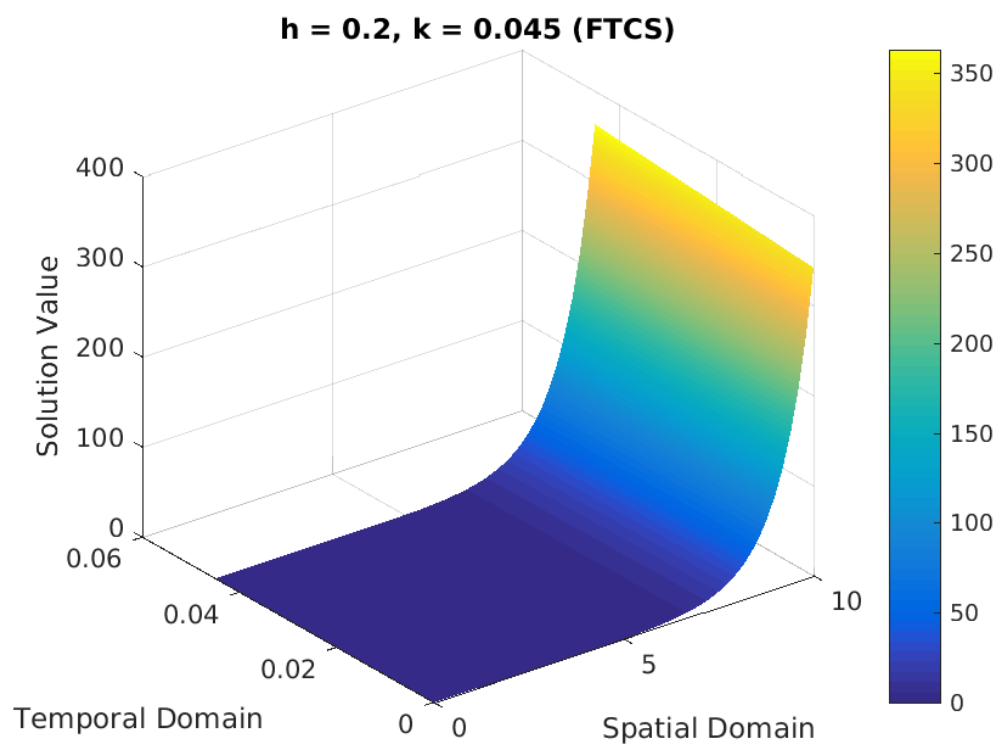
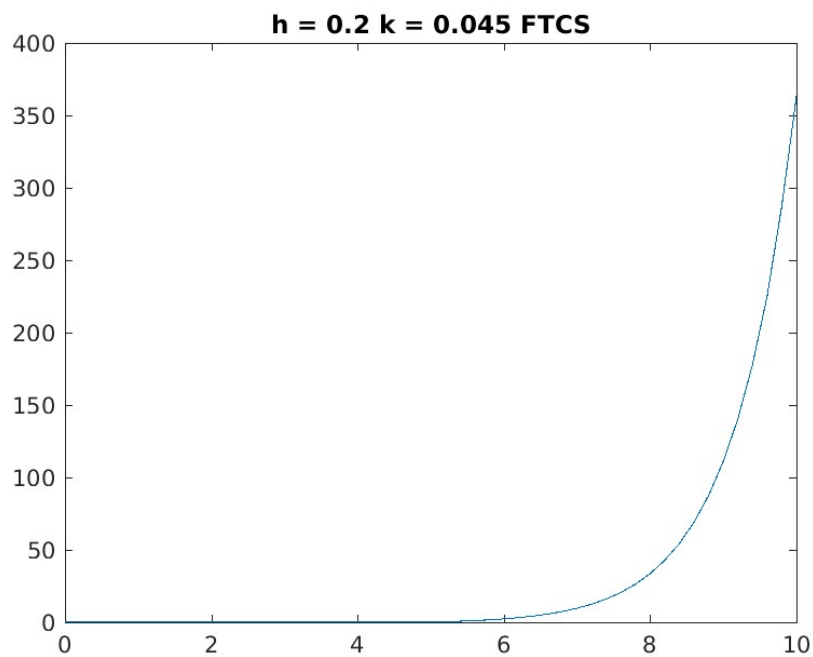


MA-473 Computational Finance Assignment 2

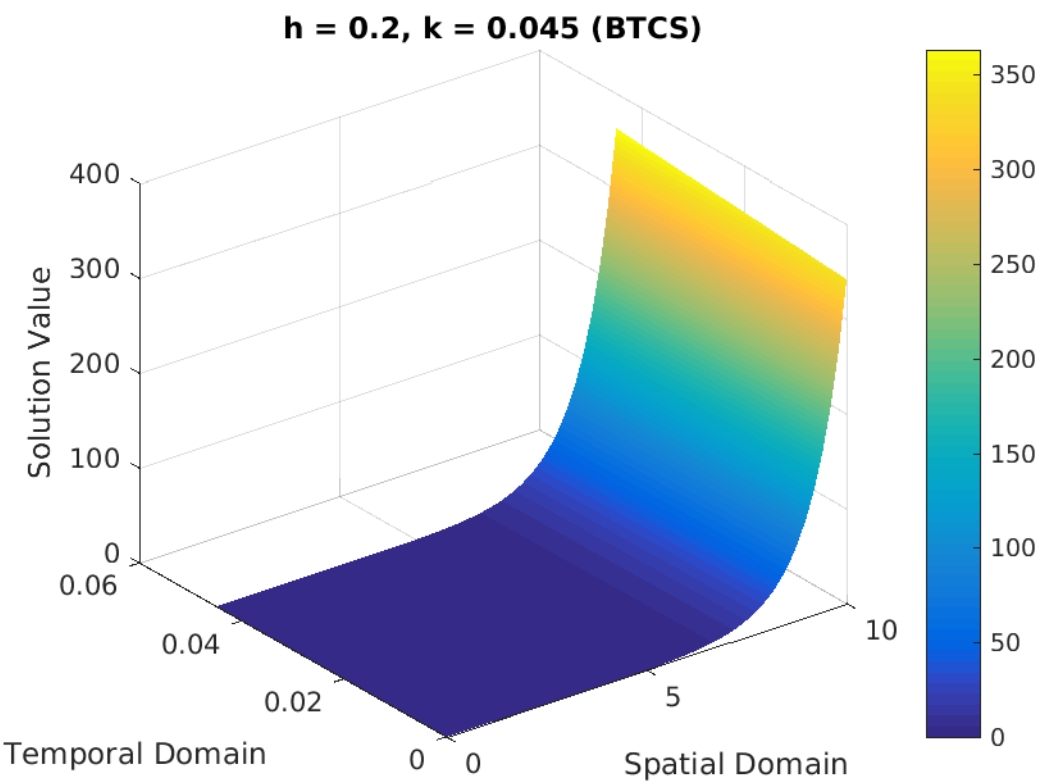
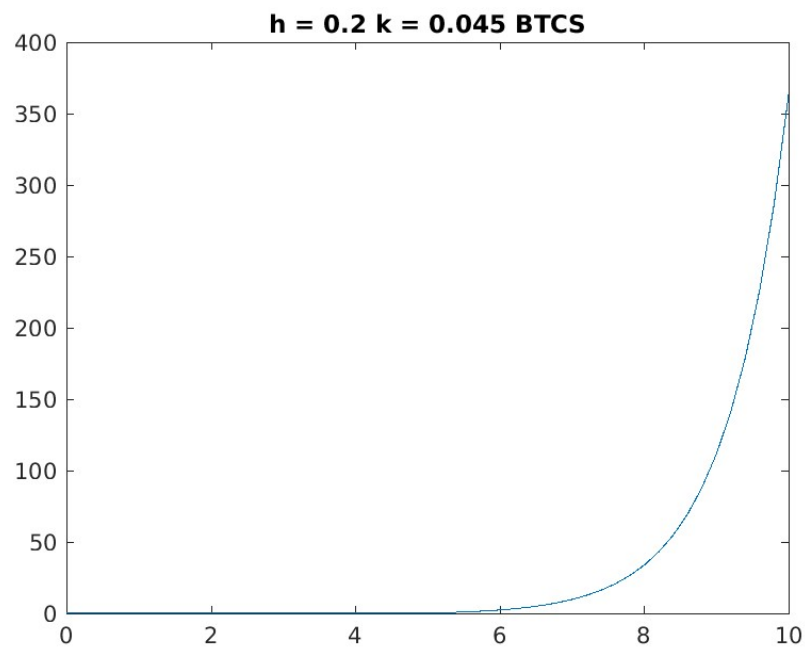
-Aman Kumar
200123007

Question 1

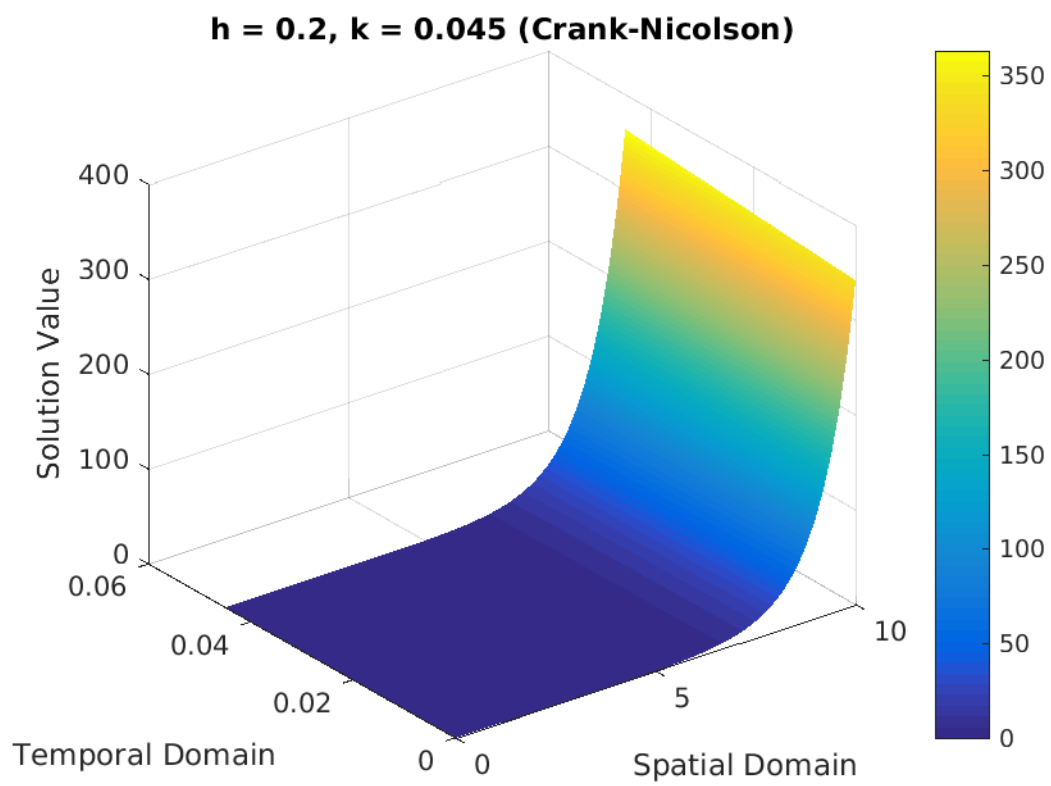
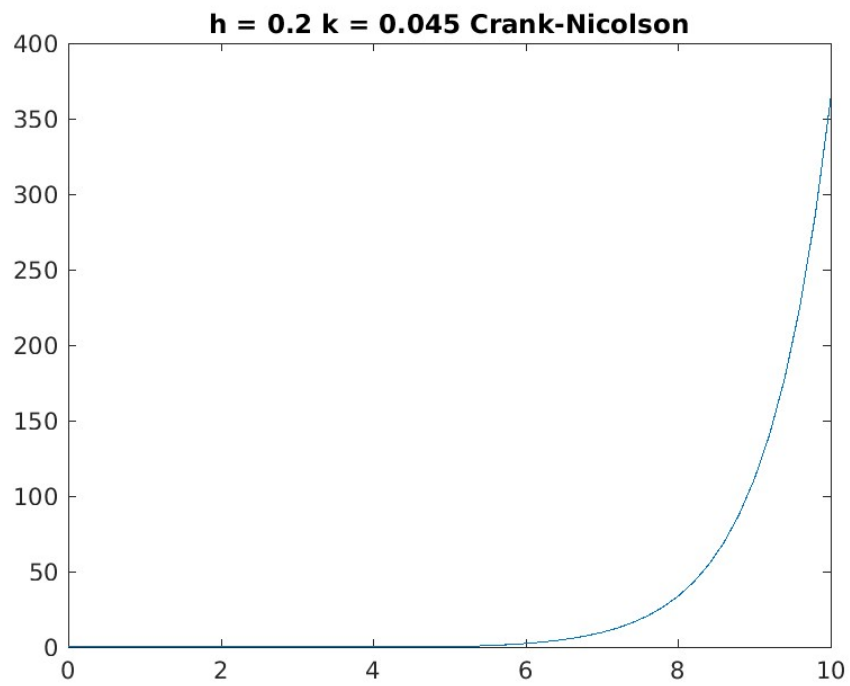
a) Forward-time and central space (FTCS) discretization scheme



b) Backward-time and central space (BTCS) discretization scheme



c) Crank–Nicolson scheme



Observation -

All the solutions obtained are almost similar and look correct. The values of Δx and Δt are choosed such that FTCS gives a stable solution. The min and max value of x taken is -5 and 5 respectively.