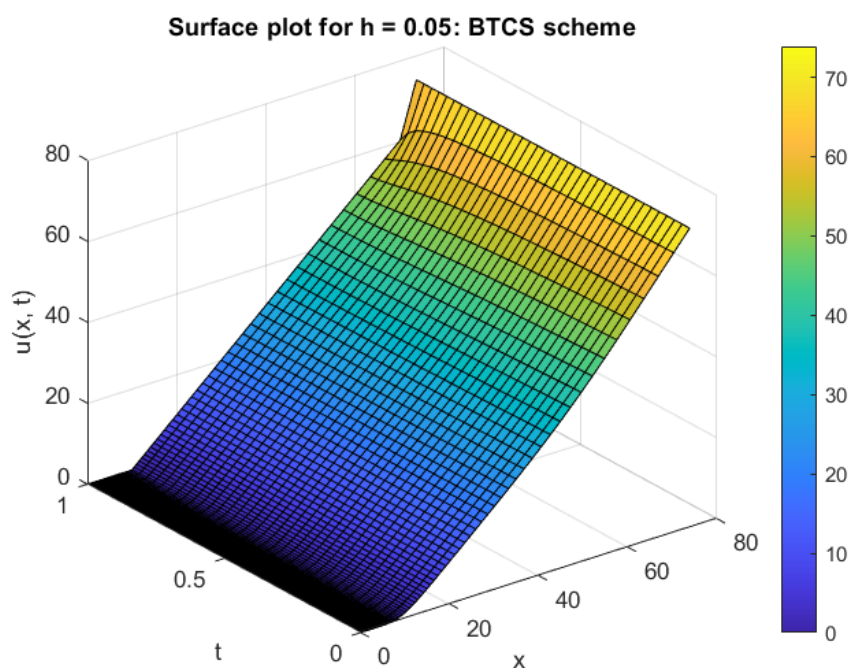
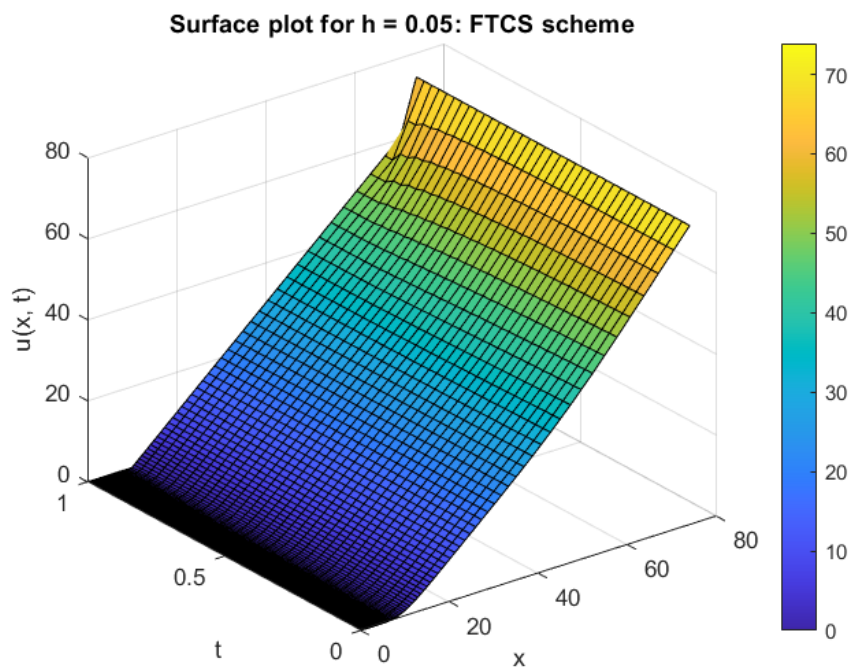
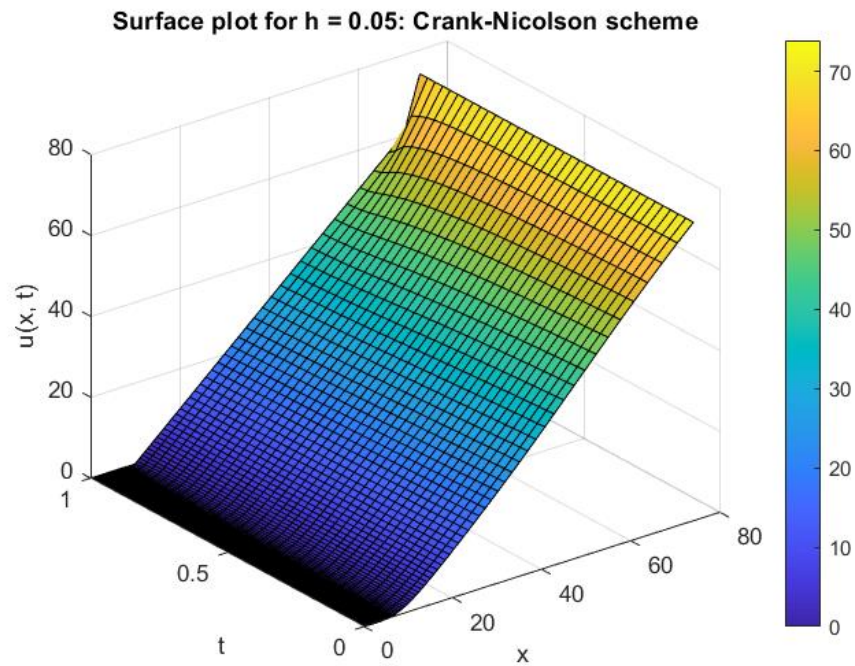


### 1 QUESTION - 1:

The surface plots for the solution of the Black Scholes PDE for European Call using different schemes are:



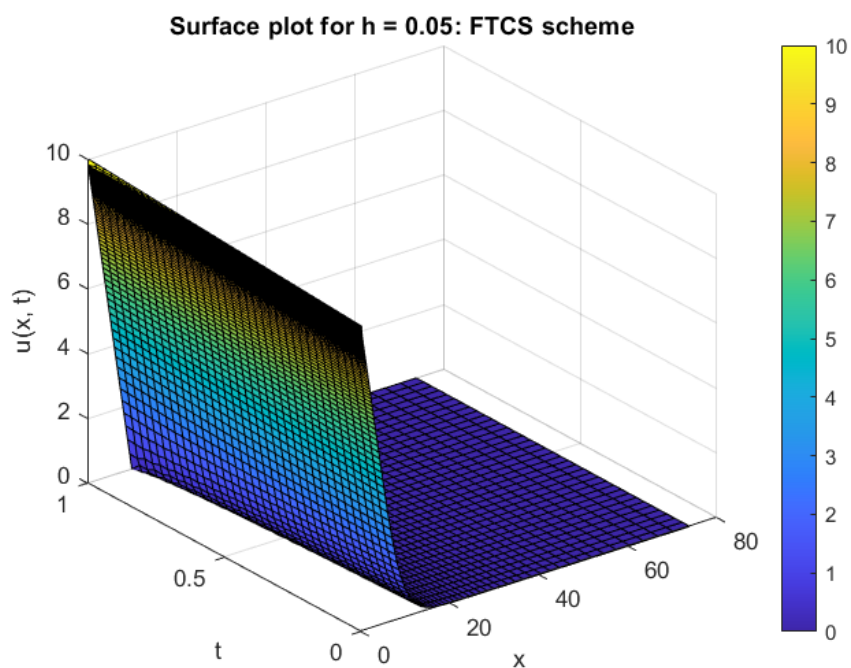


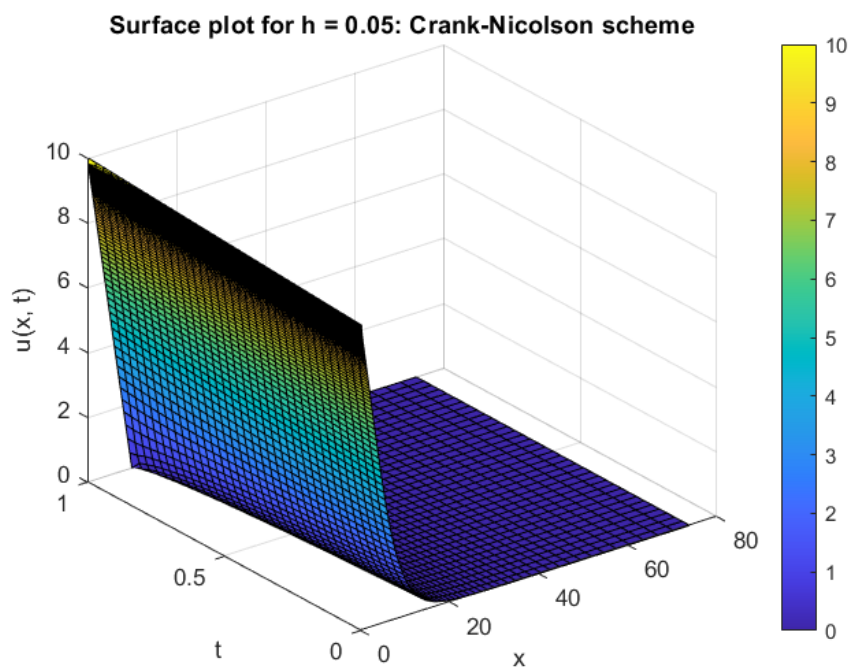
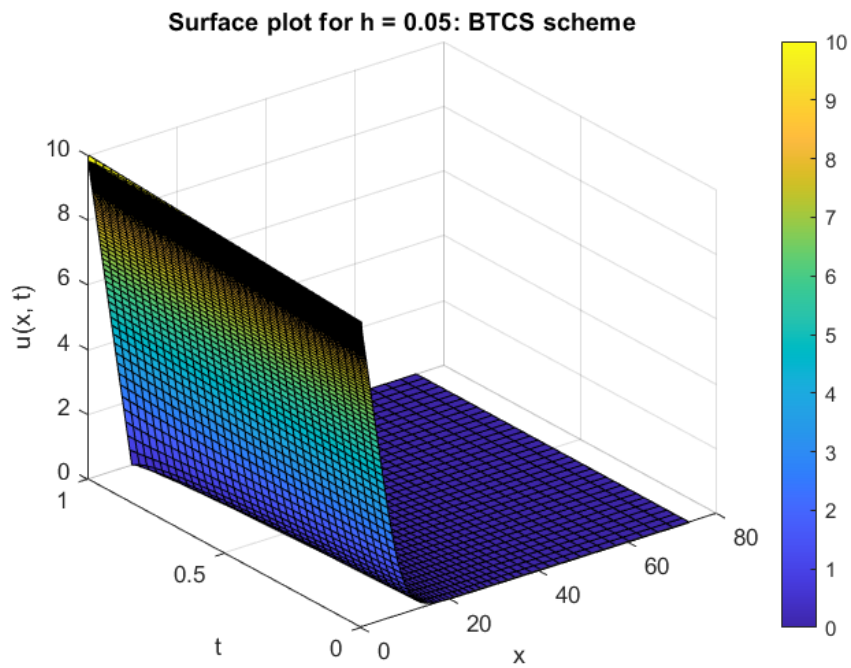
## Observations:

We can observe that the price of the European call increases as  $S$  increases, and so the surface formed is within the theoretical expectations.

## 2 QUESTION - 2:

The surface plots for the solution of the Black Scholes PDE for European Put using different schemes are:





## **Observations:**

We can observe that the price of the European put decreases as  $S$  increases, and so the surface formed is within the theoretical expectations.