Determine the price an European type, arithmetic average strike *Asian call option* using the Crank Nicolson method with the initial price of the underlying stock being $S(0) = 100$ and with expiration $T = 1$. Present your results in the tabular form for the following values of r and σ.

$$r = 0.05, 0.09, 0.15 \text{ and } \sigma = 0.1, 0.2, 0.3.$$

Plot the values of $H(R, t)$ as a function of the R and t, in a three dimensional plot for $r = 0.05$ and $\sigma = 0.3$.

Submission Deadline: 11th September 2022, 11:59 PM