# Question - 1:

**MA 323 - Monte Carlo Simulation Assignment - 7**

## Vishisht Priyadarshi

**180123053**

The mean and std deviation are as follows : = 0.00029810607002

= = 0.0222817

The expected stock prices are:

|  |  |  |
| --- | --- | --- |
| **SI No.** | **Date** | **Expected Stock Price** |
| **1** | 7th October, 2020 | 185.877333115 |
| **2** | 14th October, 2020 | 186.728656649 |
| **3** | 21st October, 2020 | 187.11342697 |

# Question - 2:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SI No.** | **Date** | **Expected Price** | **Actual Price** | **Percentage Error** |
| **1** | 7th October, 2020 | 185.877333115 | 190.7 | 2.52892862366 % |
| **2** | 14th October, 2020 | 186.728656649 | 200.05 | 6.65900692364 % |
| **3** | 21st October, 2020 | 187.11342697 | 203.75 | 8.16518921708 % |

* Following dates were considered as holidays in the computation of the prices:
  + 2nd Oct, 3rd Oct, 4th Oct
  + 10th Oct, 11th Oct
  + 17th Oct, 18th Oct
* The expected stock prices were calculated sequentially from 30th September upto 21st October. The process was simulated for 1000 iterations and their mean was then calculated.
* The random normal variables are calculated using python’s inbuilt module numpy.random.normal()
* Since the random numbers are not seeded, the values differ on each new execution of the entire code.