# Question #2

## Linear Discrete-time System Equations

If our time-step is small we can use Euler integration to approximate the state transition function which enables use to define the DT linear matrices as a function of the CT Jacobians found in Question #1. For the provided nominal trajectory

|  |  |
| --- | --- |
|  | (2.1) |
|  | (2.) |
|  | (2.) |
|  | (2.) |
|  | (14) |
|  | ( 15 ) |
| = | ( 16) |
|  | ( 17 ) |