**Results from Simulations**

The simulation was run for 500 minutes using a sampling interval of 1 minute. The real process was simulated using the difference equation as shown in (), hence the true parameters as shown in (theta) are presented in the table below.

|  |  |
| --- | --- |
| Parameter | True Value |
| a11 (b1 + b2) | -1.1866 |
| a22 (b1b2) | 0.3012 |
| a33 (a1) | 0.6321 |
| a44 (a1b2) | -0.5175 |
| a55 (a2) | 0.0907 |
| a66 (a2b1) | -0.0334 |
| b11 (b4 + b3) | -1.453 |
| b22 (b4b3) | 0.5134 |
| b33 (a4) | 0.3935 |
| b44 (a4b3) | -0.3331 |
| b55 (a3) | 0.0307 |
| b66 (a3b4) | -0.0186 |

The parameters in the table above are functions of the parameters in table (), the functions are indicated in brackets, see table () for reference. Equation () is re-written as

|  |  |  |
| --- | --- | --- |
|  |  | () |

The estimated parameters are expected to converge to the true parameters as given in table() above. The open-loop identification was simulated in offline mode and results are given in the table below.