

## Part-C

### 6) Comparison of Camera Calibration in Matlab & Theory.

i) In Theory,

$$\text{Intrinsic matrix} = \begin{bmatrix} 4.76e+03 & 6.5e & 2.8e \\ 0 & 4.79e+03 & 1.43e \\ 0 & 0 & 1 \end{bmatrix}$$

where as in matlab

$$\text{Intrinsic matrix} = \begin{bmatrix} 3.02e+03 & 0 & 883 \\ 0 & 3.02e+03 & 652 \\ 0 & 0 & 1 \end{bmatrix}$$

A significant difference is found in the Results.

ii) In theory

$$\text{focal length} = 4.76e+03$$

where as, in matlab using Camera Calibration app

$$\text{focal length} = 3.02e+03$$

Minute Error of nearly 1 is found.

In the above two cases minute differences are identified.