CONTROL SYSTEM-2

PRACTICAL FILE

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List of Experiments

S.no.	Aim	Sec 2
1	Practical problems using state space equations in MATLAB	18 August
2	Pole placement and observer design for a given state space model using MATLAB	1 September
3	Modelling and control of Cruise control system using MATLAB	22 September
4	Modelling and control of DC motor using MATLAB	29 September
5	The Frequency design method of a Cruise control system.	17 October
6	Obtain the transfer function of the system defined by the following state space equations: $\begin{bmatrix}\dot{x}_1\\ \dot{x}_2\\ \dot{x}_3\end{bmatrix} = \begin{bmatrix}0 & 1 & 0\\ 0 & 0 & 1\\ -5 & -25 & -5\end{bmatrix}\begin{bmatrix}x_1\\ x_2\\ x_3\end{bmatrix} + \begin{bmatrix}0\\ 25\\ -120\end{bmatrix}u$ $y = [1 \quad 0 \quad 0]\begin{bmatrix}x_1\\ x_2\\ x_3\end{bmatrix}$ Also obtain the unit step response of the given system.	25 November
7	Step response and impulse response of second order systems for varying damping ratio: (i) $G(s) = \frac{10}{s^2+2s+10}$ (ii) $G(s) = \frac{25}{s^2+4s+25}$	26 November
8	The Frequency design method of DC motor using MATLAB.	27 November