

PS2	NAME	
Problem 1a	Can take Laplace transform including initial conditions	
1.1		
1.2	Wrote out equation for time response, including the contribution from $G(s)U(s)$ and that of the initial conditions	
1.3	Able to separate through partial fractions	
1.4	Able to separate a repeated root through partial fractions. I.e. $A/s^2 + B/s$	
1.5	Can take inverse Laplace	
Problem 1b	Understands how to separate a complex root into partial fractions.	
1.6		
Problem 2	Understands that this is a third order system	
2.1		
2.2	Can write down the equations of motion for the system and convert them into impedances (this can be done in one step)	
2.3	Can produce one equation relating the output to the input from the 3 original equations	
Problem 3	Must realize that although there are 3 inertias there is only one independent motion since the gears force the inertias to move together, so there will only be one equation	
3.1		
3.2	Can combine the inertias by reflecting them across the gears	
3.3	Uses balance of torques to relate the force produce by mass M	
3.4	It's ok for people to use the DC motor equation directly out of the book	
3.5	Must have the correct output relationship the problem calls for E_a/X , not E_a/θ	

Where 1 == Not correct or didn't Do

2 == Somewhere in the middle, correct method incorrect answer

3 == Correct or very close to correct

Hi all,

We are trying this additional method of grading for the Problem Sets to provide you with more feedback on what you are doing wrong/well on the problem sets.

Hope it helps.

Melissa