

Partner 1: _____

Partner 2: _____

Rate yourself on your understanding/confidence for each midterm topic.
Use a scale from 1 to 5, where 5 is very confident.

Topic	Details or Examples	Partner 1 Rating	Partner 2 Rating
Digital Logic	<ul style="list-style-type: none"> • nMOS and pMOS transistors • Digital logic gates • Boolean algebra 		
Digital Gate Delay	<ul style="list-style-type: none"> • 1st-order differential equations • RC transistor models 		
Digital System Power	<ul style="list-style-type: none"> • Dynamic voltage scaling 		
Sampling and Aliasing	<ul style="list-style-type: none"> • Sampling continuous-time signals • Aliasing for sine and cosine functions • Rotating wheel effect 		
Signal Reconstruction	<ul style="list-style-type: none"> • Nyquist sampling theorem • Periodicity of sampled signals • Ideal low-pass filter placement 		
Frequency Response	<ul style="list-style-type: none"> • Magnitude response • Phase response • Bode plots 		
Impedance	<ul style="list-style-type: none"> • Impedance of inductors and capacitors • Finding frequency response of a circuit 		
X/O Plots	<ul style="list-style-type: none"> • Making X/O plots via vector subtraction • Finding frequency response from X/O plots 		
State Space Models	<ul style="list-style-type: none"> • Discrete-time state space formulation • Open loop response • Closed loop response 		
System Stability	<ul style="list-style-type: none"> • Eigenvalues and eigenvectors • Linear phase portraits 		

Now choose one of the topics above, and write and solve a problem about that topic that could reasonably appear on the midterm.

Topic:

Problem Statement

Solution