L25Q1	Speech is intelligible if frequencies up to 3.5 kHz are preserved. What is the	7	kHz		
	Nyquist rate?				
L25Q2	Music is often filtered to include sounds up to 20 kHz. What sampling rate	fs>40kHz			
	should we use?				
L25Q3	Assume we sample at the vertical lines. Digitize the waveform using four-bit				
	samples.				
	The dots above represent the closest horizontal lines (as best I can tell). The bit				
	sequence would be: 0111 1010 1001 0101 0101 0111 1100 1100 0110 0110				
	1010 1111 (“clipping”!) 1111 1000 0111 1000				
L25Q4	If the voltages 2.93 and 5.26 are quantized to the nearest 0.25 V, what are the				
	quantization errors?				
L25Q5	How many levels in a 10-bit quantizer?	1024			
L25Q6	When sampling at =8 , what is the frequency of the signal above after	1	Hz		
	reconstruction?				
L25Q7	Under what conditions on sampling and on quantization will you incur a loss				
	of information?				
	Quantization will always incur an error - Sampling must be done at the Nyquist				
	rate or higher to avoid introducing additional error.				
L25Q8	CD-quality music is sampled at 44.1 kHz with a 16-bit quantizer. How much	882000	bytes		
	memory (in Bytes) is used to store 10 seconds of sampled-and-quantized data?				
L25Q9	CD-quality music is sampled at 44.1 kHz with a 16-bit quantizer. It is stored on	132	min	mono	
	a 700 MB CD. How many minutes of music do you predict a single CD can hold?	66	min	stereo	
	(Does your answer account for stereo?)				
L25Q10	Digital voice mail samples at 8 kHz. 32 MB of memory is filled after 3200				
	seconds of recording. How many bits of resolution is the quantizerutilizing?	10 bits/sample			