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MUEN D156, 09:30–10:45 TR

Homework 8: Consonance & Dissonance
10 Points: Due at the beginning of class, Thursday, 9 April 2009

There are two parts to this homework assignment. Each part counts 5 points. Late homework will receive a grade of zero.

Part 1:

The ten tones given in the table below have the same intensity (70 dB). Using the principles derived from the Plomp and Levelt experiment (Plomp & Levelt, 1965) which of the five tone pairs would have the maximum amount of dissonance (minimum amount of consonance)? Why? Hint: compute critical band estimates using 15% of the mean frequency of the two tones in each pair.

Pair	Tone 1	Tone 2
1	498 Hz	502 Hz
2	490 Hz	510 Hz
3	481 Hz	519 Hz
4	465 Hz	535 Hz
5	450 Hz	550 Hz

Part 2:

Which of the tone pairs will sound the loudest? Why?

Plomp, R., & Levelt, W. J. M. (1965). Tonal consonance and critical bandwidth. *Journal of the Acoustical Society of America, 68*, 548-560.