

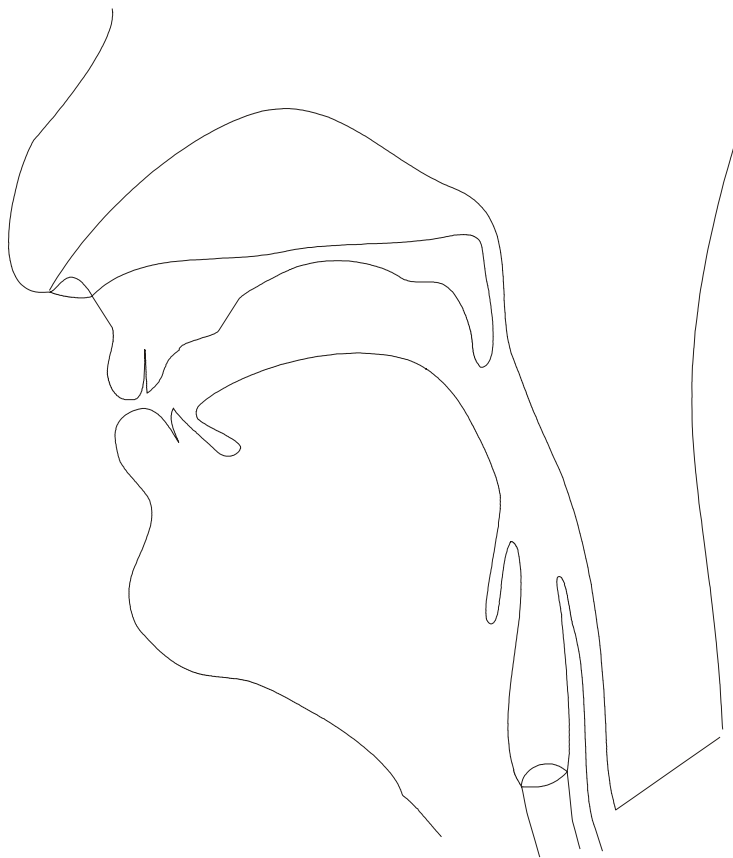
This exam, handed out on the last day of class, is due in 427 Blake by 6:00 p.m. on Thursday 17 December. Feel free to hand it in earlier, but don't miss the deadline. Please *type* or *word-process* your answers to the questions on the first page, except for any odd symbols you may have to produce. Make sure that your answers are identified by question number and/or letter and that your *student number* (but not your name) appears on each page. Staple your answer pages to this page.

Short answer questions (4% each):

1. What are the major and minor *articulatory* parameters that we use to describe vowel quality?
2. What are the *acoustic* parameters used to describe vowel quality?
3. If you think of the vocal tract as a tube that can be squeezed at one point along its length, where is the narrowest point for [ɑ]? Where is it for [i]?
4. Why are most back vowels rounded and most front vowels unrounded?
5. What do the English “lax” vowels have in common?
6. When a speaker produces something like [apa ata aka], what acoustic cues do we use to figure out the places of articulation of the different voiceless stops?
7. How do listeners tell fricatives like [f], [θ], [s], and [ʃ] apart?
8. List all the **airstream mechanisms** and **phonation types** that can go with stops.
9. List all the places of articulation available for **fricatives**. Which ones are not found with stops?
10. Clearly describe the differences among **coarticulation**, **secondary articulation**, and **double articulation**, giving examples of each from any language you choose.
11. How do formants correlate with vowel “height” and “backness”?
12. Give an example of how two English words with the same consonant and vowel sounds can differ by stress placement.
13. What are the main phonetic correlates of stress in English?
14. How does stress in English differ from that in Spanish or Italian?
 - a. At the word level
 - b. At the sentence level
15. What are the differences between contour tone and register tone?
16. What acoustic characteristics do the American and British [ɹ] share? How do they differ in articulation?

'hæpi 'hælədeɪz. But wait—there's more...

17. In the correct place on the diagram, write the letter of each item on the list. (17%)



- A. teeth
- B. tongue tip
- C. hard palate
- D. lips
- E. tongue root
- F. epiglottis
- G. tongue back
- H. larynx
- I. tongue blade
- J. nasal cavity
- K. alveolar ridge
- L. trachea
- M. esophagus
- N. tongue body
- O. pharynx
- P. uvula
- Q. velum

18. Fill in the following chart with the consonants of English (19%):

		<i>Bilabial</i>	<i>Labiodental</i>	<i>Dental</i>	<i>Alveolar</i>	<i>Postalveolar</i>	<i>Palatal</i>	<i>Velar</i>	<i>Glottal</i>
Stops	Vls.								
	Vd.								
Fricatives	Vls.								
	Vd.								
Affricates	Vls.								
	Vd.								
Nasals									
Approximants									

Student Number
