

Answer ALL questions except the last in a bluebook. Put your name on EVERYTHING you hand in. When you are finished, fold and place the exam sheet in the bluebook. Follow time indications. There are two pages to the exam. **80 MINUTES.**

1. Define the following terms *briefly*. 10 mins.

- | | |
|-----------------------|--------------|
| 1. resonant consonant | 3. coda |
| 2. velarization | 4. affricate |

2. List the suprasegmental features and the physical variables they are related to. 5 mins.

3. What do each of the following symbols indicate? Just give the appropriate term(s) 5 mins.

- | | |
|------------------------------|------------------------------|
| 1. [ʔ] (next to a consonant) | 3. [◌] (under a consonant) |
| 2. [◌~] (under a vowel) | 4. [ʷ] (next to a consonant) |

4. Give articulatory definitions of the following sounds. 10 mins.

- | | |
|--------|--------|
| 1. [b] | 3. [ʎ] |
| 2. [ħ] | 4. [ʒ] |

5. Give phonetic symbols for the following vowel definitions. 5 mins.

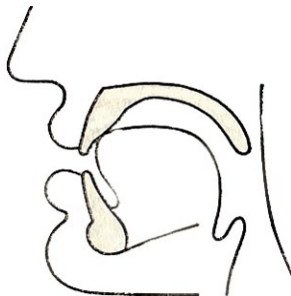
- | | |
|------------------------------|--------------------------------|
| 1. lax mid central unrounded | 3. mid lax front rounded nasal |
| 2. tense low back rounded | 4. retroflex central |

6. Copy the following “ratios,” filling in the blanks. 5 mins.

1. [p] : [ϕ] :: [t] : [] :: [] : [ϙ] :: [k] : []

2. [i] : [e] :: [ɪ] : [] :: [u] : [] :: [ʊ] : []

7. Describe the following articulation; what are you able to infer from it; what segments might it represent? 10 mins.



8. Describe why it is not possible to identify each of the following segment types from a single sagittal cross-section frame. 10 mins.

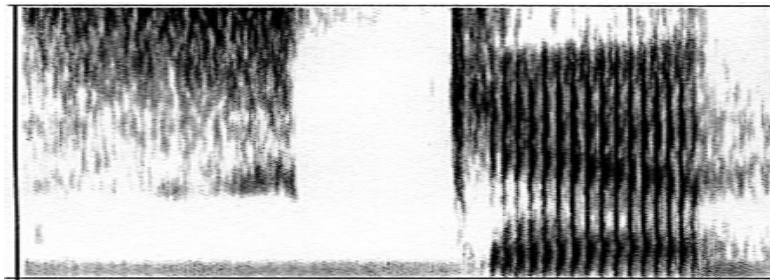
1. affricates
2. laterals

9. In each of the following English words, one or more letters is in bold type and underlined. State what detail(s) or process(es) of English pronunciation these letters illustrate. 10 mins.

1. **pin**
2. **skit**
3. ba**ll**
4. fa**st**en
5. gl**tt**on
6. pe**t**

10. Describe in detail the articulatory process by which a vowel is produced? How does it differ from the articulatory process that produces obstruents. 15 min.

11. The following spectrogram represents four segments: two stops, a fricative and a vowel. Answer the questions, or do otherwise what is instructed, below.



1. What variable is represented on the horizontal axis? _____
2. What variable is represent on the vertical axis? _____
3. On the horizontal axis mark the beginning and end of the fricative with the letters f_1 and f_2 . Draw vertical lines from the bottom to the top of the display to set off the fricative
4. On the horizontal axis mark the beginning and the end of the vowel as V_1 and V_2 . Draw vertical lines from the bottom to the top of the display to set off the vowel.
5. Mark the beginning and end of the first stop with S_1 and S_2 . These points may coincide with others you've already drawn.
6. Is the first stop voiced or voiceless? _____