## Q1. Spectrogram 1

This is a version of exercise 1 on p 166 of your text but with my voice and the vowels in a different order. The vowels (and diphthongs) V1 V2 V3 V4 represent the four vowels [r ej a oj] in some order. Identify them and measure their duration in milliseconds F1 and F2 for each about $25 \%$ of the way through and again at about $75 \%$ of the way through.



Q 2 Spectrogram 2 shows four alveolar stop consonants and the beginnings of the vowels from 4 CV syllables. (The vowels were all [A] but were artificially shortened to show more detail in the consonantal parts.) One of the stops is an ejective. The other three are plosives with three VOT values, corresponding to voiceless aspirated, voiceless unaspiarted and (pre-) voiced.


Identify each of the stops with the appropriate transcription and provide VOT for each. Note VOT in ejectives can be measured in a way analogous to in aspirated stops. (The noisy part dies out rapidly in ejectives and is followed by near silence ).

> Transcription VOT (milliseconds)

Stop A
Stop B

## VOT (milliseconds)

Stop C
Stop D [ ]

Q3. Decode the first paragraph the IPA instructions for Rogers' exercise 24 on p 86 into English orthography. You can leave the narrow transcriptions in square brackets and the italicized English word spelled huh as they are .

Here's an example of a translation of the shorter instructions to exercise $27.0 n \mathrm{p} 7$.
"Read the following nonsense words aloud." Note that the instructions are given in RP (southern British) pronunciation. This means some of the vowels may be different than yours and there will be some missing syllable final [I] sounds. If you can't figure out what a particular word is, guess a similar word and put (?) after it. If you can't think of anything remotely similar, then leave the untranslated word in between / / marks in your translation.

