FINAL EXAM: LING1111

1.   What is the articulatory difference between a [g] and a [p]?

A possible solution: [g] is a voiced velar stop, created by forming a closure (and subsequent release of closure) of the body of the tongue against the velar region while the vocal folds are vibrating.
[p] is a voiceless bilabial stop, created by forming a closure (and subsequent release of closure) of the upper and lower lip while the vocal folds are apart.

Point allocation: 1 point for correct articulatory difference in voicing, place of articulation, and manner of articulation, respectively (= 3 pts)

2.   Download/listen to the file transcribe01.wav and transcribe the sentence you hear in IPA.

A possible solution: [aŋgəla mɛɐkl]

Point allocation: overall 5 pts

3.   Try segmenting the spectrogram below. It says "di ɛkzam ɪs izi pʰizi" spoken by a German native speaker. Draw in boundaries for all sounds and identify the intervals with the respective sounds. The sound file is provided as well.

d | i | ɛ | k | z | a | m | ɪ | s | i | z | i | pʰ | i | z | i
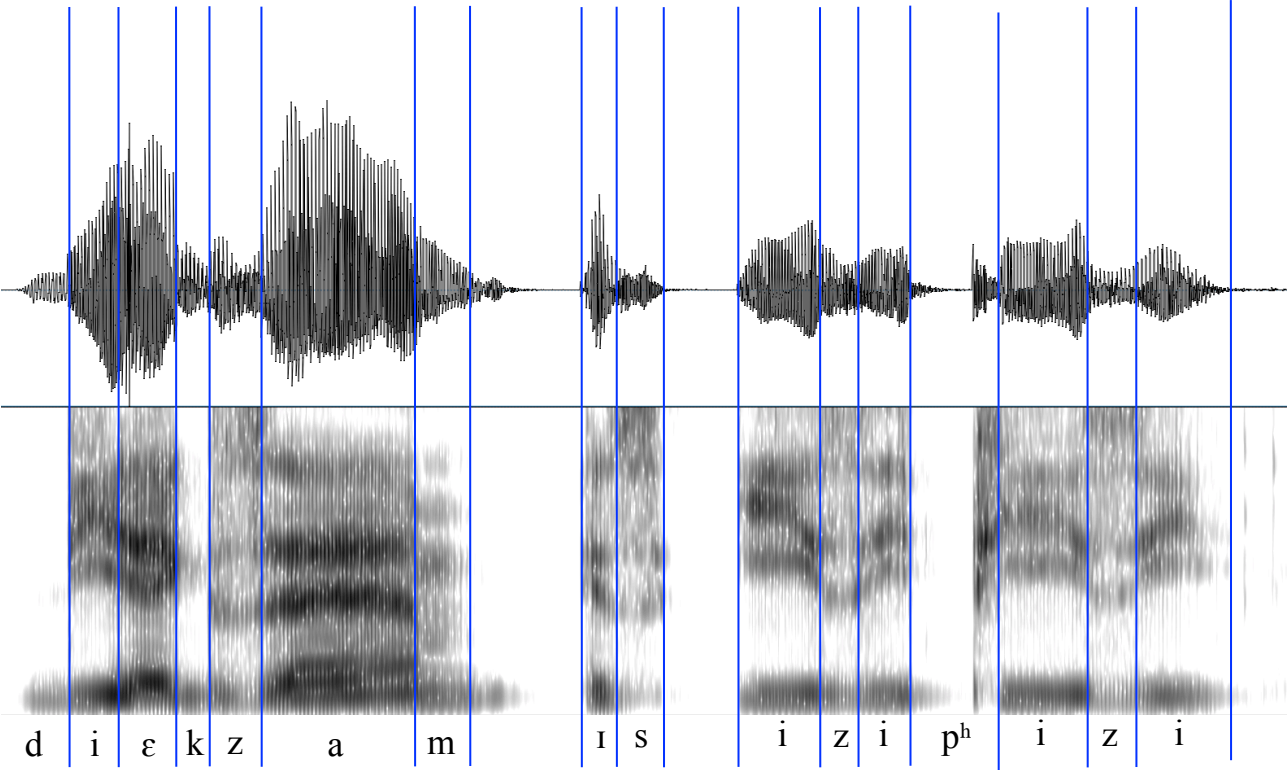
Point allocation: overall 5 pts

4.   Mokilese is a Micronesian language. Examine the distribution of [i, u] and [i̥, u̥] in this language. Are the two vowel sets, distinct phonemes of each other, or are they allophones of the same phoneme? Argue for your answer by describing the phonological distribution of these sounds.

	word	translation
a	pi̥san	full of leaves
b	dupu̥kda	bought
c	apid	outrigger support
d	pokito	to strike something
e	ludʒuk	to tackle
f	kaskas	to throw
g	uduk	flesh
h	pokito	to strike something
i	pu̥ko	basket
j	pil	water
k	ludʒuk	to tackle

l	ki̥sa	we two
m	su̥pwo	firewood

A possible solution: There are no minimal pairs for [i̥, u̥] vs. [i, u].
The voiceless vowel [u̥] only occurs between voiceless consonants, [u] can occur everywhere else. [u̥] and [u] are in complementary distribution and can thus be considered allophones of an underlying phoneme.

While parts of the corpus (a,c,j,l) suggest a similar pattern for the distribution of [i̥] vs. [i], the word [pokito] speaks against a similar analysis. There are two possible analyses. For example, the complementary distribution can be formulated in a more restrictive way, e.g. [i̥] occurs between a voiceless stop and a voiceless fricative, and [i] elsewhere. This analyses is not preferred, as it is not a phonetically motivated process. Alternatively, one could claim that there is no strong evidence for [i̥] and [i] being allophones of the same underlying phoneme.

Point allocation: 10 pts
+1 pt for all because the question was ambiguous
+1 pt for mentioning the absence of minimal pairs
+2 pts for identifying the allophony of [u̥] vs. [u],
+2 pts for the distributional analysis supporting allophony of [u̥] vs. [u]
+2 pts for a accurate distributional analysis of [i̥] vs. [i]
+2 pt for recognizing either inconclusive evidence for [i̥] vs. [i] or suggesting a very restrictive complementary distribution of the sounds (e.g. i̥ only preceding voiceless alveolar fricative).