

FINAL

PART I. Please answer the following questions.

1. (10 pts.) Write linear formal rules using features to express the following processes (assume we are dealing with English sounds only and 1 pt extra credit if you can use only one rule to express the processes in c).

a.) fricatives are voiced between vowels

b.) obstruents are voiceless if word final

c.) obstruents are voiceless before voiceless consonants and voiced before voiced segments

d.) regular velar consonants become fronted velars before high front vowels

e.) low vowels are nasalized between nasal consonants

2. (10 points) Assume an English phoneme consonant inventory. Which distinctive features distinguish the following pairs from other sounds (use as few as possible, but as many as you can that these sounds share and that distinguish these sounds from others not like them – may not completely rule out other sounds)?

a. t, d

b. z, ʒ

c. k, ŋ

d. f, p

e. l, ɹ

3. (10 points) Give the features needed to identify the natural class(es) of the following (based on English inventory). Remember to use only features you need.

- a. voiced fricatives
- b. voiced obstruents
- c. voiceless oral stops
- d. velar consonants
- e. stops and affricates

4. (15 points) Briefly describe the following phonological frameworks: Syllable/Metrical Theory, Autosegmental Phonology, and Optimality Theory. Just outline the major aspects of the theory, state what you think are pros and cons of the theories, and include a description of one of the technical terms associated with each theory (usually an abbreviation!). For example, if we were talking about the traditional generative linear approach, we could use a term like features and define that and how it operates within the linear framework.

5. (5 points) How do you think this course and this topic will help you in your future career or academic plans?

PART II – Please refer to the following data to answer the following questions.

1. Tojolabal (10 pts)

Examine the following data. Determine whether or not [k] and [k^ʔ] are allophones of 1 phoneme or separate phonemes. [k^ʔ] is a glottalized voiceless velar stop and is phonetically different from plain [k]. Assume IPA transcription. Be sure to discuss environments and the idea of allophones requiring predictability versus phonemes being unpredictable. Be sure to be thorough in your discussion.

	IPA	Gloss			IPA	Gloss
1.	kisim	my beard		7.	sak	white
2.	t ^s ak ^ʔ a	chop it down		8.	k ^ʔ iʃin	warm
3.	koktit	our feet		9.	skut ^h ʃu	he is carrying it
4.	k ^ʔ ak	flea		10.	k ^ʔ u:tes	to dress
5.	p ^ʔ akan	hanging		11.	snika	he stirred it
6.	k ^ʔ aʔem	sugar cane		12.	ʔak ^ʔ	read

2. Farsi (10 pts)

Looking at the 3 sounds (voiced alveolar trill [r], voiceless alveolar trill [r̥] and voiced alveolar tap [ɾ]), provide an analysis to suggest if they are 3, 2 or 1 phoneme(s) and which sounds are allophones of which sounds if necessary. Be sure to identify which sound(s) you think is/are the phoneme(s) and why (including alternate analyses). Also, be sure to discuss any relevant phonetic or feature-based approach to why the alternations might occur (if this process is similar to other languages we have seen, please discuss that). You don't have to come up with rules in features per say, but you can mention features if it makes sense.

	IPA	Gloss			IPA	Gloss			IPA	Gloss
1.	ærtɛʃ	army		7.	ahar̥	starch		13.	ahari	starched
2.	farsi	Persian		8.	behtær̥	better		14.	bæradær̥	brother
3.	qædri	a little bit		9.	hærntowr̥	however		15.	berid	go
4.	rah	road		10.	tʃær̥	four		16.	biræŋg	pale
5.	ris	beard		11.	tʃedʒur̥	what kind		17.	tʃera	why
6.	ruz	day		12.	ʃir̥	lion		18.	darid	you have

3. Maltese (20 pts.)

Identify the alternant forms of the definite morpheme. Select 1 form as underlying and provide an analysis for what is happening. Then, discuss the alternative analysis (if you select the other form, what is happening). You should use diagrams, prose as well as feature rules to do so.

Data Set A.

	Indefinite form	Gloss			Definite form	Gloss
1	fellus	<i>chicken</i>		10	ilfellus	<i>the chicken</i>
2	aria	<i>air</i>		11	laria	<i>the air</i>
3	mara	<i>woman</i>		12	ilmara	<i>the woman</i>
4	omm	<i>mother</i>		13	lomm	<i>the mother</i>
5	kelb	<i>dog</i>		14	ilkelb	<i>the dog</i>
6	ʔattus	<i>cat</i>		15	ilʔattus	<i>the cat</i>
7	ħitan	<i>walls</i>		16	ilħitan	<i>the walls</i>
8	abt	<i>armpit</i>		17	labt	<i>the armpit</i>
9	ispaniol	<i>Spanish</i>		18	lispaniol	<i>the Spanish (language)</i>

Now consider the data below

Data Set B.

	Indefinite form	Gloss			Definite form	Gloss
1	ti:n	<i>a fig</i>		5	itti:n	<i>the fig</i>
2	dawl	<i>a light</i>		6	iddawl	<i>the light</i>
3	šhab	<i>some clouds</i>		7	issšhab	<i>the clouds</i>
4	natura	<i>nature</i>		8	innatura	<i>the nature</i>

You can assume all of the sounds in this language are accounted for in these data (that is, don't assume other sounds exist besides the sounds we have here). Based on these data, list all of the alternants of the definite morpheme prefix (include the choices from data set A as well). Now, modify your preceding analysis to include these alternations. Be sure to select 1 form as underlying and write rules to derive the other forms. Also, include some analysis on why alternative analyses don't work as well. Provide derivations for each possible surface form (for each alternant of the morpheme – there should be 6).