

## Problem 1: Swahili (25%)

Several sets of noun prefixes, singular and plural, are illustrated in the data from Swahili given below (Perrott, 1951). Divide the noun roots into classes on the basis of which prefix set they occur with. State any semantic correlation these classes may have. Standard Swahili orthography is used.

(1) miti	'trees'	(19) kikapu	'basket'
(2) ukubwa	'size'	(20) mikono	'arms'
(3) mtumishi	'servant'	(21) watumishi	'servants'
(4) vibanda	'huts'	(22) mtende	'date palm'
(5) wazee	'old men'	(23) mtoto	'child'
(6) mkono	'arm'	(24) mti	'tree'
(7) kiti	'chair'	(25) urefu	'length'
(8) vikapu	'baskets'	(26) kitabu	'book'
(9) mtu	'man'	(27) mchungwa	'orange tree'
(10) michungwa	'orange trees'	(28) wageni	'strangers'
(11) umoja	'unity'	(29) visu	'knives'
(12) watoto	'children'	(30) watu	'men'
(13) kisu	'knife'	(31) viti	'chairs'
(14) miguu	'legs'	(32) mguu	'leg'
(15) mgeni	'stranger'	(33) kibanda	'hut'
(16) mitende	'date palms'	(34) uzee	'old age'
(17) vitabu	'books'	(35) mzee	'old man'
(18) udogo	'smallness'		

## Problem 2: French (25%)

The following sentences illustrate the application or an important rearrangement transformation of French syntax. State this rule, assuming that in French there is another rule which transforms de+le into en in certain context.

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|--|-----------------------------------|
| (1) Il voit Pierre.                    | 'He sees Peter.'                  |
| (2) Il est certain de son innocence.   | 'He is certain of his innocence.' |
| (3) *Il cela voit.                     | 'He sees that.'                   |
| (4) Il est certain de cela.            | 'He is certain of that.'          |
| (5) *Il voit le.                       | 'He sees it.'                     |
| (6) *Il un livre voit.                 | 'He sees a book.'                 |
| (7) *Il de cela est certain.           | 'He is certain of that.'          |
| (8) Il voit mon ami.                   | 'He sees my friend.'              |
| (9) Il en est certain.                 | 'He is certain of it.'            |
| (10) *Il est certain en.               | 'He is certain of it.'            |
| (11) Il voit cela.                     | 'He sees that.'                   |
| (12) *Il mon ami voit.                 | 'He sees my friend.'              |
| (13) *Il de son innocence est certain. | 'He is certain of his innocence.' |
| (14) *Il est certain de le.            | 'He is certain of it.'            |
| (15) Il voit un livre.                 | 'He sees a book.'                 |
| (16) Il le voit.                       | 'He sees it.'                     |
| (17) *Il de le est certain.            | 'He is certain of it.'            |
| (18) *Il Pierre voit.                  | 'He sees Peter.'                  |

## Problem 3: an Austronesian language (25%)

The following data from an Austronesian language show the results of the concatenation of segments:

## a. Suffixed forms

/weid-da/	[weidida]	'proceed upward'
/lus-saŋ/	[lusisaŋ]	'jump from'

## b. Prefixed forms

/ep-p <sup>w</sup> oatol/	[am <sup>w</sup> p <sup>w</sup> oatol]	'game'
/sap <sup>w</sup> -paa/	[sampaɔ]	'world, earth'
/ak-keelail/	[aŋkeelail]	'demonstrate strength'

## c. Reduplicated forms

/pap-pap/	[pampap]	'swimming'
/kik-kik/	[kiŋkik]	'kicking'
/tat-tat/	[tantat]	'writhe'
/sas-sas/	[sansas]	'stagger'
/dil-dil/	[dindil]	'penetrate'
/sel-sel/	[sensel]	'tied'
/sar-sar/	[sansar]	'fade'

Question 1: How does the process in (a) differ from those in (b) and (c)?

Question 2: Write rules to show the relationship between the lexical and phonetic forms.

Consider more data from the language:

d. /kiassi/	[kiassi]	'catcher'
/kakko/	[kakko]	'putting on airs'
/nappa/	[nappa]	'Chinese cabbage'
/rerrer/	[rerrer]	'to be trembling'

Question 3: What would your rules have predicted the phonetic forms of the words in (c) would be?

Question 4: Try to provide an explanation for why the patterns in (d) differ from those in (a,b,c).

## Problem 4: an Altaic language (25%)

The following data are from an Altaic language spoken in Siberia. The data shown below consist of nouns in various case forms.

Notes: [ɣ] represents a voiced velar fricative; [u] represents a high back unrounded vowel.

	<i>Absolute</i>	<i>Plural</i>	<i>Our N</i>	<i>Your N</i>	<i>Gloss</i>
a.	aya	ayalar	ayabut	ayayut	'father'
b.	oyo	oyolor	oyobut	oyoyut	'child'
c.	at	attar	apput	akkuut	'horse'
d.	kus	kustar	kusput	kuskut	'duck'
e.	oyus	oyustar	oyusput	oyuskut	'bull'
f.	sep	septer	seppit	sepkit	'tool'
g.	et	etter	eppit	ekkit	'meat'
h.	tobuk	tobuktar	tobukput	tobukkuut	'knee'

Question 1: List the allomorphs for each of the following morphemes: 'plural marker,' 'our,' 'your,' and 'meat.' What are the underlying forms that you assume for the four morphemes?

Question 2: Give rules to account for the observed alternations.