en(B)

Twenty-first International Linguistics Olympiad

Brasília (Brazil), 23–31 July 2024

Individual Contest Solutions

Problem 1. Structure of the verb form:

1. subject (**t-** 1st person sg, **mət-** 1st person du/1st person pl, ∅- 2nd person sg, **ne-** 3rd person du=3rd person pl)
2. **ə** materialises here if and only if needed to avoid a cluster of two consonants word-initially or word-finally, or a cluster of three consonants in any position.
3. tense (**ku-** present, **je-** future, ∅- past)
4. **ine-**: direct object = 1st person sg (subject = 2nd person du/2nd person pl)
5. verb root
6. **-la**: subject/direct object = 1st person pl/2nd person pl
7. tense (**-ŋ** present/future, -∅ past)
8. **ə** materialises here if and only if needed to avoid a cluster of two consonants word-initially or word-finally, or a cluster of three consonants in any position.
9. **-tək**: subject = 2nd person du/2nd person pl (direct object = 1st person sg);
   direct object (**-tək** 2nd person du/2nd person pl, **-n** 3rd person sg, **-net** 3rd person du, **-new** 3rd person pl)

Sound changes:

1. the final vowel of a prefix is lost before another vowel;
2. **t+j > cc**, **t+l > ll**, **t+n > nn**, **t+ŋ > ṇŋ**;
3. if **a** is present, all **e/i/u** in the word become **a/e/o**, respectively.

(a)

19.	**kulleŋən**	*you*$_{(sg)}$ *lead him*
20.	**jinejguŋtək**	*you*$_{(du)}$ *will bite me*
21.	**tekminnew**	*I caught them*$_{(pl)}$
22.	**təjohallaŋtək**	*I will wait for you*$_{(pl)}$
23.	**mətkonŋevlaŋən**	*we*$_{(pl)}$ *send him*

(b)

24.	*you*$_{(sg)}$ *will see them*$_{(du)}$	**jelhuŋnet**
25.	*we*$_{(pl)}$ *bit him*	**mətəjgolan**
26.	*you*$_{(pl)}$ *catch me*	**kenakmellaŋtək**
27.	*they send you*$_{(du)}$	**nekunŋivŋətək**
28.	*you*$_{(du)}$ *led me*	**inelletək**

Problem 2. possessed$_a$-sfx$_a$-POSS$_b$ possessor$_b$-sfx$_b$

m

- animals: *lion, leopard, flamingo*
- objects, body parts: long/thin
-

	sg	pl
sfx	-∅	**-bii** *
POSS	**-ma**	**-itcha** *

f

- animals: *zebra, impala, elephant, baboon, giraffe*
- objects, body parts: short/thick
-

	sg	pl
sfx	**-ko**	**-bee**
POSS	**-sa**	**-eta**

* **e**, **o** > **i**, **u** before masculine plural endings (blocked by an intervening **a**, e.g., **zzokwana-bii**)
-bii-itcha > **-biitcha**

(a)
19. **wiriko** — D. *short, thick root*
20. **roobee** — C. *horns (e.g., of dik-diks)*
21. **mu'a** — B. *thin twig*
22. **zzahubii** — A. *tails (e.g., of leopards)*

(b)
23. **gariko** — *car (= short lorry)*
24. **makubii** — *tall cooking pots*
25. **hazzakeko** — *female thief*
26. **dongobee** — *zebras*
27. **zzahoko** — *(short, thick) tail*
28. **nqibii** — *leopards*

(c)
29. *the flamingo's leg* — **uphukwama gogogogo**
30. *the zebra's* V. pseudolablab *tuber* — **shumukosa dongoko**
31. *the male impalas' horns* — **ruubiitcha puphubii**
32. *the female strangers' thick stick* — **mu'akoeta uhuyitibee**
33. *the boys' tall cooking pot* — **makuitcha eratibii**
34. *the impala's long, thin roots* — **wiribiisa pophoko**

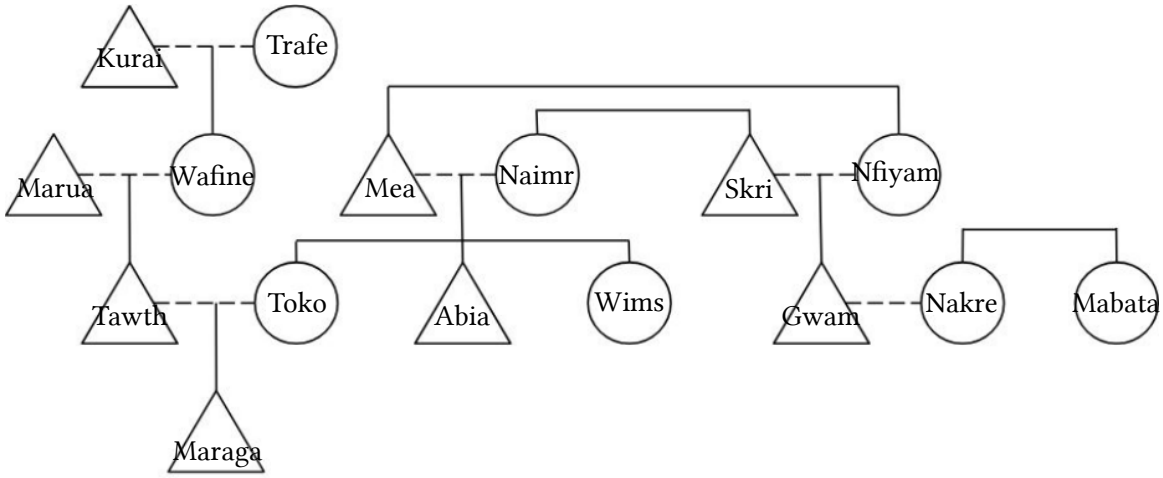
Problem 3.

- **A B-ane X** { **rä** — if **A** is a woman; **yé** — if **A** is a man
  - **A** = **B**'s relative
  - **X** = kinship term

ŋafe	father
ŋame	mother
nge	child
zath	grandfather, grandson
zath ŋare	grandmother, granddaughter
nane	elder sibling
ngth	younger sibling
enat	son-in-law
ŋäwi	uncle (mother's brother)
terms after sister exchange:	
bäiŋaf	MB = FZH, ZS = WBS, BS = HZS
bäiŋam	FZ = MBW, ZD = WBD, BD = HZD
yamit	**bäiŋaf** and **bäiŋam**'s child
yumad	**yamit**'s wife

B	brother
D	daughter
F	father
H	husband
M	mother
S	son
W	wife
Z	sister

(a)



(b)
1. **bäiŋam rä**
2. **enat yé**
3. **zath ŋare rä**
4. **nge yé**
5. **Nakreane**
6. **rä**

(c) **Skri Abiaane bäiŋaf yé.**

Problem 4.

(a)
1. **çɯm ʾaa** (foot — receptacle): C. *flip-flops*
2. **dâw çɯɯm** (person — foot): I. *foot*
3. **dâw nõr** (person — mouth): B. *mouth*
4. **dâw nõr keet** (person — mouth — leaf/tongue): H. *tongue*
5. **dâw tôog** (person — daughter): F. *daughter*
6. **dâw sôb pis piis** ((person — hand — small) — small): D. *little finger*
7. **dâw tôoj** (person — nose): J. *nose*
8. **dôoʾ piis** (to make — small): E. *to decrease (something)*
9. **sôb dak** (hand — to put): A. *ring*
10. **suk ʾaa** (flour — receptacle): G. *can of flour*
11. **be keet** (tree — leaf/tongue): M. *leaf*
12. **be tɯm** (tree — seed/eye): Q. *seed*
13. **yak yaa** (manioc — to roast): T. *macaxeira*
14. **yak nâax** (manioc — water): S. *tucupi*
15. **nâx pôog** (water — big): P. *main river*
16. **nâx taax** (water — tapir): L. *capybara*
17. **taax ʾuuy** (tapir — domesticated): K. *domesticated tapir*
18. **tɯm tâag** (seed/eye — to know): N. *glasses (spectacles)*
19. **yon ʾuuy** (anteater — domesticated): R. *domesticated anteater*
20. **yon tôoj** (anteater — nose): O. *revolver*

(b)
21. **dâw sôb piis** (person — (hand — small)): *finger*
22. **dâw sôob pis** ((person — hand) — small): *little hand*
23. **dâw çɯm piis** (person — (foot — small)): *toe*

(c)
24. *brook, stream* — **nâx piis** (water — small)
25. *little tapir* — **taax pis** (tapir) — small
26. *eye* — **dâw tɯm** (person — seed/eye)
27. *granddaughter* — **dâw tôg tôog** (person — (daughter — daughter))

Problem 5. Word order:

- S V (S = subject of a intransitive verb; V = verb)
- A-**lu** V P (A = subject of a transitive verb; P = direct object)

Noun:

	noun classes:	P = S	A
	women	**rra-**	**rru-**
(♀)	men	**nya-**	**nyu-**
(♂)	men = animals	∅-	**ki-**
(♀)	animals	∅-	**ji-**
	edible things	**ma-**	
	pl	**li-**	**linji-**

Verb:

- tense (**j-** present continuous, **k-** future/past)
- (direct object)
- subject

	noun classes:	P	S	A
	women	**arr-**	**anda-**	**anda-**
(♀)	men	**any-**	**iwa-**	**ilu-**
(♂)	men = animals	∅-	**a-**	**ilu-**
(♀)	animals	∅-	**i-**	**inju-**
	edible things	∅-	∅-	∅-
	pl	**al-**	**alu-**	**alu-**

- verb root
- tense (-∅ past, -**nji** present continuous, -**la** future)

(a)
15. **mirningiya ka-wulumala** — *The man will run.*
16. **nyu-munangalu kalilu-wudurruma li-wakuku** — *The white man fed the dogs.*
17. **linji-ardulu jalu-wubanji ma-burlurlu** — *The boys/girls (children) are baking the bread.*
18. **rru-nhanawalu janda-athamanji ardu** — *The woman is chasing the boy.*

(b)
15. ♂
16. ♀
17. ⍰
18. ♂

(c)
19. *The dog chased the girl.*
    - ♀ **ji-wakukulu karrinju-athama rra-ardu**
    - ♂ **ki-wakukulu karrilu-athama rra-ardu**
20. *The pregnant woman is feeding the old women.*
    - ♀=♂ **rru-walkurulu jalanda-wudurrumanji li-bardibardi**
21. *The old man healed the Yanyuwa man.*
    - ♀ **nyu-malbulu kanyilu-yabima nya-yanyuwa**
    - ♂ **ki-malbulu kilu-yabima yanyuwa**
22. *The kangaroo will return.*
    - ♀ **wunala ki-wanila**
    - ♂ **wunala ka-wanila**