

en

Fifth Asia Pacific Linguistics Olympiad

9 – 23 April 2023

Solutions

Problem 1.

1. Verb structure:

	without [Mod]	with [Mod]																
intransitive	[Y] — STEM — t	[Mod] — X — STEM — NUMBER _X																
transitive	[Y] — X — STEM — t	[Mod] — X — STEM — NUMBER _Y																
[Mod] = ant- <i>almost</i> ta- <i>not</i>																		
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <th>intransitive</th> <th colspan="2">transitive</th> </tr> <tr> <td></td> <td></td> <td>subject > object</td> <td>subject < object</td> </tr> <tr> <td>X</td> <td colspan="2" style="text-align: center;">subject</td> <td>object</td> </tr> <tr> <td>Y</td> <td colspan="2" rowspan="2" style="text-align: center;">object</td> <td>subject</td> </tr> </table>			intransitive	transitive				subject > object	subject < object	X	subject		object	Y	object		subject	
	intransitive	transitive																
		subject > object	subject < object															
X	subject		object															
Y	object		subject															
1 st > 2 nd > 3 rd																		
	subject [Y]	object	subject [X]															
1 st DU	kapa	ŋkra																
1 st PL	ipa	kra	kay															
2 nd DU	kapwa	ŋkul	ŋkran															
2 nd PL	ipwa	kul	nan															
3 rd SG	na		pu															
3 rd DU	impa																	

$$\text{NUMBER} = \begin{cases} \mathbf{t} & \text{SG} \\ \mathbf{rm} & \text{DU} \\ \mathbf{rum} & \text{PL} \end{cases}$$

- (a) 15. *We two have cut him.*
- (b) 18. *We all have slept.*
 19. *You two have almost cut them two.*
 20. *He hasn't come.*
- (c) 21. **antpuwat**
 22. **taŋkratut**
 23. **taŋkrawaykrum**
 24. **antŋkranturum**
 25. **impakulkrat**

Problem 2.

1. Order of constituents: prefixes – noun – suffixes
 2. Prefixes: [PRE] – †a – NEG – others
 - [PRE] = ?a·k- ~ ?a··~ ?a·q- — unknown
 - †a- — ‘again’
 - NEG = †it- — ‘not’
 - €mał- ~ €małqa·· — ‘strong’ (< mał- ‘bone’); san- — ‘bad’; suł- — ‘good’
 3. Suffixes: -nana – -nam – -ni
 - -nana — ‘little’
 - -nam — ‘someone’s...’
 - -ni — ‘it is ...’
 4. kamnuq†u ‘white (adjective)’ / ?a·knuq†u ‘white (noun)’ (< †u ‘snow’)
- (a) 1. ?a·k†u — d. snow
2. ?a·k†ańnam — o. someone’s head
3. ?a·ki†miyit — q. sky
4. ?a·ki†wi·nam — g. someone’s heart
5. ?a·knuq†u·am — l. American eagle
6. ?a·kwum — h. stomach
7. ?a·q†a — i. inside (noun)
8. ?a·qatnananam — m. someone’s short tail
9. €małwumnana — f. Little Strong Belly
10. †a suki†miyitni — n. it is sunny again
11. †a sani†wi·ni — e. it is angry again
12. †it†i†ni — j. it is blind
13. kamnuq†uqatnana — a. young white-tailed deer
14. mał — b. bone
15. małnana — p. token (for a game)
16. san†a — k. Piegan
17. sani†miyit — c. bad weather
- (b) †a — again, inside.
- (c) 18. ?a·qatwum†a [PRE] – tail – stomach – inside
(that which holds the tail and stomach inside)
19. †a†it†u again – NEG – snow (again no snow)
- (d) 20. †itqatni it is tailless, it has no tail
21. ?a·ki†wi·nana little heart
- (e) 22. someone’s good stomach sułwumnam
23. eye $\underbrace{\text{?a·kaq}†i}_{\text{[PRE]}}$

Problem 3.

- 1 **wañig nibö** 4 **yigwo milö** 7 **mudun** 10 —
 2 **yigwo** 5 **mamid** 8 **raleb** 11 **agip**
 3 **yigwo aŋ nibö** 6 **kagoł** 9 — 12 —
 - $20X [ado gi da Y] = 20X [+ Y]$ ($1 \leq X \leq 3, 1 \leq Y \leq 23$)

$$20X = \begin{cases} \text{ñinjuöl} & (X = 1) \\ \text{ñinjuöl mihöp} & (X = 2) \\ \text{ñinjuöl mihau nigaŋ} & (X = 3) \end{cases}, \quad Y = \begin{cases} Y & (1 \leq Y \leq 12) \\ (24 - Y) böŋ daŋ & (13 \leq Y \leq 23) \end{cases}$$
- (a) $2 \times 38 = 76$
- (b) 8 **raleb**
 19 **mamid böŋ daŋ**
 23 (i) **wañig nibö böŋ daŋ**
 (ii) **ñinjuöl ado gi da yigwo aŋ nibö**
 53 **ñinjuöl mihöp ado gi da agip böŋ daŋ**
 61 (i) **ñinjuöl mihau nigaŋ ado gi da wañig nibö**
 (ii) **ñinjuöl mihöp ado gi da yigwo aŋ nibö böŋ daŋ**
 66 **ñinjuöl mihau nigaŋ ado gi da kagoł**

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Problem 4.

1. Sentence structure:
$$\left\{ \begin{array}{l} S (...) O (...) V \\ S T \quad T = [N] - da - [Gender (S)] - o \end{array} \right.$$
 (...): 'in ...', 'for ...'
'S belongs to N'

2. Noun phrase structure: $\left\{ \begin{array}{l} \boxed{N} \quad \boxed{D} \\ \boxed{D} - \text{daga} \quad \boxed{N} \end{array} \right. \quad \begin{array}{l} N = S \text{ or } O \\ N = \text{Possessor or } \dots \text{wo/ra} \end{array}$

- **D** = **e** [Gender] -ai 'this', **o** [Gender] -oi 'that'

- Case: **-wo** ‘in ...’, **-ra** ‘for ...’
 - Kin terms: **Possessor** + **STEM** – **Gender** (+ **Case**)
 - Possessor (*‘my, our, his’*) ↗ 6. Person
 - **qotogowar-** ‘child’, **qid-** ‘parent’, **maroq-** ‘sibling’

- #### 4. Possession: Possessor **aga** Possessee

5. Verb structure: { me[†] - O - STEM - Gender (S) present
 | O - STEM - sa - Gender (S) future

- + **me** > **mo** / _**o**
- Verb stems: **obo** ‘to hit’, **oote** ‘to become ill’, **qaqa** ‘to bite’, **qe** ‘to speak’, **Ra*** ‘to cry’, **Re*** ‘to sleep’, **Roo*** ‘to fall’, **see** ‘to cut’
- O 6. Person

6. Person: **Ra**-* 1st SG, **Ri**-* 1st PL, Ø 3rd SG

$$* \quad \mathbf{R} = \begin{cases} \mathbf{n} & \# _ \\ \mathbf{r} & \text{otherwise} \end{cases} \quad \begin{array}{l} \text{e.g. Ra- } 1^{\text{st}} \text{ SG} > \underline{\text{naqaqasabi}}, \underline{\text{meraqqaqabi}} \\ \text{Roo } 'to fall' > \underline{\text{noosabe}}, \underline{\text{meroobi}} \end{array}$$

		in T/D	in N	in V
7. Gender:	masculine	-s	-e	-bi
	feminine	-w	-o	-be

- (a) 18. *This house belongs to my father.*
19. *The mouse will speak for this fish.*
20. (i) *He hits our mother's boar.*
 (ii) *Our mother's boar hits him.*
21. *The hawk falls in that devil's house.*

- (b) 22. Bido merebe.
23. Peraqote osoi niqotoqowarora niobosabi.
24. Buquro owoi maroqedawo.
25. Esaidaga mesidae aga qide owoidaga murowo moobobi.
26. Bugaritawe aga qibiro taragarowo meraseebe.

Problem 5.

1. Sentence structure: Location S V

2. Noun phrase structure: $\begin{cases} \text{N}^* & \text{N} \\ \text{na/khe}^\dagger - \text{N}^* & \text{my/his N} \\ \text{N}_1 - \text{V}_\rightarrow^H & \text{N}_2^* \quad \text{N}_1 \text{'s N}_2 \end{cases}$

* $\text{C}_\sigma \rightarrow \emptyset$ (C_σ : word-final consonant)

† $\text{CV} + \text{V}_\alpha (= \text{V}) \rightarrow \text{CV}_\alpha$

$\text{CV} + \text{V}_\alpha (\neq \text{V}) \rightarrow \text{CVnV}_\alpha$ (V_α : word-initial vowel)

3. Verb structure: STEM — -no plural — -khV_←^H question

— usually: STEM → STEM — STEM — ma

4. Vowel harmony: $\text{V}^H = \begin{cases} \text{a} & \text{V}_T = \text{a} \\ \text{e} & \text{V}_T = \text{e, i, ü} \\ \text{o} & \text{V}_T = \text{o, u} \end{cases}$

$\text{V}_T(\text{C})\text{V}_{\leftarrow}^H$ $\text{V}_{\rightarrow}^H(\text{C})\text{V}_T$

lei 'lying'	human nouns	<i>cucumber, snake, worm</i>
le 'standing'		<i>tree, house, dog</i>
ba 'sitting'		<i>bird</i>

- (a) 16. *The children are in the water garden.*
- 17. *Is his wife's worm usually in my water?*
- (b) 18. *The child is usually in my tree [standing].*
- 19. *Is my wife usually there [sitting]?*
- (c) 20. (i) *His friends are in his jungle.*
(ii) *His houses are in his jungle.*
- (d) 21. **Khedolo khenamiya leino.**
- 22. **Areyo dodo lekhe?**
- 23. **Nayo khuro na leno.**
- 24. **Khuro namakhü lelemakha?**