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-** *almost*, **ta-** *not*

	intransitive	transitive	
		subject > object	subject < object
X	subject	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**		

[NUMBER] = **t** SG; **rm** DU; **rum** PL

(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] – **ɬa** – NEG – others
   - [PRE] = **ʔa·k-** ∼ **ʔa··-** ∼ **ʔa·q-** — unknown
   - **ɬa-** — *'again'*
   - NEG = **ɬit-** — *'not'*
   - **¢maƙ-** ∼ **¢maƙqa··-** — *'strong'* (< **maƙ-** *'bone'*); **san-** — *'bad'*; **suk-** — *'good'*
3. Suffixes: **-nana** – **-nam** – **-ni**
   - **-nana** — *'little'*
   - **-nam** — *'someone's...'*
   - **-ni** — *'it is ...'*
4. **kamnuqɬu** *'white* (adjective)*'* / **ʔa·knuqɬu** *'white* (noun)*'* (< **ɬu** *'snow'*)

(a)

1.	**ʔa·kɬu**	—	d.	*snow*
2.	**ʔa·kɬaḿnam**	—	o.	*someone's head*
3.	**ʔa·kiɬmiyit**	—	q.	*sky*
4.	**ʔa·kiɬwi·nam**	—	g.	*someone's heart*
5.	**ʔa·knuqɬuɬaḿ**	—	l.	*American eagle*
6.	**ʔa·kwum**	—	h.	*stomach*
7.	**ʔa·qɬa**	—	i.	*inside* (noun)
8.	**ʔa·qatnananam**	—	m.	*someone's short tail*
9.	**¢maƙwumnana**	—	f.	*Little Strong Belly*
10.	**ɬa sukiɬmiyitni**	—	n.	*it is sunny again*
11.	**ɬa saniɬwi·ni**	—	e.	*it is angry again*
12.	**ɬiɬiɬni**	—	j.	*it is blind*
13.	**kamnuqɬuqatnana**	—	a.	*young white-tailed deer*
14.	**maƙ**	—	b.	*bone*
15.	**maƙnana**	—	p.	*token (for a game)*
16.	**sanɬa**	—	k.	*Piegans*
17.	**saniɬmiyit**	—	c.	*bad weather*

(b) **ɬa** — *again, inside.*

(c)

18.	**ʔa·qatwumɬa**	[PRE] – *tail* – *stomach* – *inside* *(that which holds the tail and stomach inside)*
19.	**ɬaɬiɬu**	*again* – NEG – *snow (again no snow)*

(d)

20.	**ɬitqatni**	*it is tailless, it has no tail*
21.	**ʔa·kiɬwi·nana**	*little heart*

(e)

22.	*someone's good stomach*	**sukwumnam**
23.	*eye*	**ʔa·kaqɬiɬ** (**ʔa·kaq** = **[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	—

- $20\,\mathsf{X}$ [**ado gi da** Y] $= 20\,\mathsf{X}$ [$+\,\mathsf{Y}$] $\quad (1 \le \mathsf{X} \le 3, 1 \le \mathsf{Y} \le 23)$

$$20\,\mathsf{X} = \begin{cases} \textbf{ñinjuöl} & (\mathsf{X} = 1) \\ \textbf{ñinjuöl mihöp} & (\mathsf{X} = 2) \\ \textbf{ñinjuöl mihau nigaŋ} & (\mathsf{X} = 3) \end{cases}, \quad \mathsf{Y} = \begin{cases} \mathsf{Y} & (1 \le \mathsf{Y} \le 12) \\ (24 - \mathsf{Y})\ \textbf{böŋ daŋ} & (13 \le \mathsf{Y} \le 23) \end{cases}$$

(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: S (...) O (...) V (...): *'in ...', 'for ...'*
   S T T = N–**da**–Gender (S)–**o** 'S *belongs to* N'
2. Noun phrase structure: N D N = S or O
   D–**daga** N N = Possessor or **...wo/ra**
   - D = **e**–Gender–**ai** *'this'*, **o**–Gender–**oi** *'that'*
3. Noun structure: STEM–Gender (+Case)
   - Case: **-wo** *'in ...'*, **-ra** *'for ...'*
   - Kin terms: Possessor + STEM–Gender (+Case)
     - Possessor (*'my, our, his'*) ☞ 6. Person
     - **qotoqowar-** *'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**
   - O ☞ 6. Person
   - 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'*
6. Person: **Ra-*** 1st SG, **Ri-*** 1st PL, ∅ 3rd SG
   * **R** = **n** #_ ; **r** otherwise e.g. **Ra-** 1st SG > **naqaqasabi**, **meraqaqabi**
   Roo *'to fall'* > **noosabe**, **meroobi**
7. Gender:

	in T/D	in N	in V
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. **Buqaritawe aga qibiro taragarowo meraseebe.**

Problem 5.

1. Sentence structure: Location S V

2. Noun phrase structure:

N*		N
na/khe†–N*		*my/his* N
N_1–$\mathbf{V}^{H}_{\rightarrow}$	N_2*	N_1 *'s* N_2

   * $\mathbf{C}_{\sigma} \rightarrow \varnothing$ ($\mathbf{C}_{\sigma}$: word-final consonant)
   † $\mathbf{CV}{+}\mathbf{V}_{\alpha}(=\mathbf{v}) \rightarrow \mathbf{CV}_{\alpha}$
   $\mathbf{CV}{+}\mathbf{V}_{\alpha}(\neq\mathbf{v}) \rightarrow \mathbf{CVnV}_{\alpha}$ ($\mathbf{V}_{\alpha}$: word-initial vowel)

3. Verb structure: STEM — **-no** plural — **-khV**$^{H}_{\leftarrow}$ question
   – *usually*: STEM → STEM — STEM — **ma**

4. Vowel harmony: $\mathbf{V}^{H} = \begin{cases} \mathbf{a} & \mathbf{V}_T = \mathbf{a} \\ \mathbf{e} & \mathbf{V}_T = \mathbf{e}, \mathbf{i}, \mathbf{\ddot{u}} \\ \mathbf{o} & \mathbf{V}_T = \mathbf{o}, \mathbf{u} \end{cases}$ $\mathbf{V}_T(\mathbf{C})\mathbf{V}^{H}_{\leftarrow}$ $\mathbf{V}^{H}_{\rightarrow}(\mathbf{C})\mathbf{V}_T$

5. Verb stems:

lei *'lying'*	human nouns	*cucumber*, *snake*, *worm*
le *'standing'*		*tree*, *house*, *dog*
ba *'sitting'*		*bird*

(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?**