myitute ## # 13 PX Sixth International Olympiad in Theoretical, Mathematical and Applied Linguistics

Bulgaria, Sunny Beach, 4–9 August 2008

Solutions of the Problems of the Individual Contest

Mytitute 精神 林 溪 序》 **Problem #1.** Rules:

- 1. The apostrophe indicates length if it follows a vowel, and is read as [ə] if it follows a consonant.
- 2. The letter w stands for a rounding of the lips after a consonant and for the sound [w] otherwise.
- 3. [ə] is pronounced, though not written, between any consonant and a following sonorant consonant ([l m n]).
- 4. [ə] is also pronounced before a consonant cluster at the beginning of a word.
- 5. p t j g gw q qw are pronounced as voiced consonants ([b d j g g^w γ γ^w]) at the beginning of a word or between vowels and as voiceless consonants ([p t c k $k^w x x^w$]) at the end of a word or next to another consonant.

Answers:

- (a) 12 [əksənxōyon], 13 [ətkəbox], 14 [gəmūjəmin], 15 [emtoywatk], 16 [dēbəlc]; **加州州 紫 珠 溪 縣**
- (b) 17 tp'te'sn, 18 mtesgm, 19 alapt'g, 20 glamen.

Problem #2. (a) Rules:

- 1. Number of syllables. Each line contains 6 syllables.
- 2. Alliteration. See the statement of the problem.
- 3. Internal rhyme. Let us denote the vowels (and diphthongs) in each line by $V_1,\,V_2,\,\ldots,\,V_6.$ At least one consonant immediately following V_5 must immediately follow V_n ($n=1,\,2$ or 3). Also, in even lines $V_n = V_5$.

For instance, cf. lines IV, 1–6 (alliteration is marked in boldface, internal rhyme by underlining):

- há<u>ð</u>i gramr,þars gnú<u>ð</u>u,
- geira hregg viðsegg i,
- 3 (rauð fnýsti ben blóði)
- bryngogl í dyn Skoglar,
- þás á **r**au<u>s</u>n fyr **r**æsi
- (b) Leftover words: hægra, smíði.

1 \mathbf{r} íks (breifsk **r**eiddra øxa rymr ; knýttu spjýr $_c$ glymja $\frac{3}{d}$ svartskyggð bitu seggi sverð þjóðkonungs f<u>erð</u>ar, þás (f hugfyldra | holða) hlaut andskoti Gauta $(\text{h} \circ \underline{\mathbf{r}} \text{ vas } j |$ songr | of $_k$ svírum (flugbeiddra m vigra

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Problem #3. The modifier follows its head in both languages.

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(a)	jun	bone	
	$i ext{-}jun$	skeleton	(multitude of bones)
	$_{\scriptscriptstyle \mathcal{Y}}$ $i ext{-}wahnawa$	bunch of bananas	(multitude of bananas)
Musitate Market 3	i-drai	calendar	(multitude of bananas) (multitude of days) (holy day) (holy place) (holy house)
杨	$drai ext{-}hmitr\"otr$	Sunday	(holy day)
dillite "	$gaa\hbox{-}hmitr\"otr$	sanctuary	(holy place)
LINSON .	$uma ext{-}hmitr\"{o}tr$	church	(holy house)
	$ng\ddot{o}ne ext{-}uma$	wall	(house border)
	$ng\ddot{o}ne$ - $gej\ddot{e}$	coast	(water border)
	$nyine ext{-}thin$	awl	(tool to poke)
'k'	tii	to write	1/2 V/O
Myitute At X 'S	bé-tii	pencil	(tool to poke) (tool to write) (tool to poke)
titule star	bé-wöli	fork	(tool to poke)
TillSylve	$w\ddot{o}ta$	animal	THE STATE OF THE S
	$b\'e-w\"oli-w\"ota$	spur	(tool to poke animal)
	$b\acute{e}$ - $\hat{o}du$	cup	(tool to drink)
	$ba ext{-}jicute{e}$	coast	(water border)
1/2	ba-bwén	twilight	(night border)
(b)	a- $pulut$	bed ***	(might border) (place to sleep)
Stuff Office	ord Other	Olysia Olysia	The appropriate
(p)	wahnawa 'banana	n', drai 'day'; wöli 't	o poke', <i>pulut</i> 'to sleep'.
(c)	<i>i-bii</i> 'swarm of bee	es (multitude of bees)', <i>tusi-hmitrötr</i> 'Bible (holy book)'.
()		•	,

1. -kasma 'above, overhead', -kotoya 'for', -pit 'with';
2. -šeh 'like, as if':

- 3. -ta?m plural;
- 4. **-tih** 'only (just, right)'.

comes after y, the two sounds exchange places.

The possessive propound xAfter a nasal consonant (m, n, η) the stops p, t, k become voiced (b, d, g) respectively). If k

The possessive pronouns are ?as 'my' and mis 'your'; if the noun begins with a stop, this consonant becomes voiced and the corresponding nasal appears before it.

(a) cakyasmatih right above the vine kamaŋšeh like a shadow Maritute of the little of the ?as mok my corn 🖟 🤲 mis ndacta?m your teeth pahsunbit with the squash perolkotoyašehta?m as if for the kettles

for the chair pokskukyotoya (b) with my kettle ?_{As} mberolpit Militate Militate '\$ kocakšehtih just like a mountain posts komda?m 🤼 above the shadows kлmлŋgлsmлta?m mis ŋgumguy your town

Ph.

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Problem #5. The Inuktitut sentences have the following general structure:

$$egin{array}{c|cccc} \mathsf{X}\text{-}(q) & \mathsf{V}\text{-} & \mathsf{V}\text{-} & \mathsf{X} \lor (\mathrm{himself}).' \\ \mathsf{X}\text{-}(q) & \mathsf{Y}\text{-}(r)mik & \mathsf{V}\text{-}si\text{-} & \mathsf{'X} \lor \mathrm{a} \mathsf{Y}.' \\ \mathsf{X}\text{-}up & \mathsf{Y}\text{-}(q) & \mathsf{V}\text{-} & \mathsf{V}\text{-} & \mathsf{'X} \lor \mathrm{the} \mathsf{Y}.' \end{array}$$

object or a subject of a sentence that doesn't have a definite object, it also gets -r before the ending -mik when it is an indefinite object (nanu-q - nanu-r-mik ilumphoisis where X and Y are nouns and V is the verb. If a noun gets the ending -q when it is either a definite To say 'your', -(q) is replaced by -it, -up by -vit.

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The verb receives the following suffixes:

- -j following a vowel or -t following a consonant;
- an ending for the persons of the subject and the definite object, if there is one:
 - in the first two schemata: -u-tit '2', -u-q '3';
 - in the third schema: -a-it '2/3', -a-nga '3/3', -a-atit '3/2'.

A transitive verb without an object is interpreted as reflexive.

- The wolf saw your shaman. (a) 13. Military of the state of the st
 - Your polar bear hurt a boy. 14.
 - 15. Your hunter cured himself.
 - You shot the teacher. 16.
 - 17. You came.
 - 18. You cured a hunter.
 - 19. Angatkuup aanniqtaatit.

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- 20. Ilinniaqtitsijiup inuuhuktuq takujanga.
- 21. Amaruit ukiakhagtug.
- 22. Qingmirmik qukiqsijutit.
- 23. Qingmiit ilinniaqtitsijimik aanniqsijuq.

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