

# Sixth International Olympiad in Theoretical, Mathematical and Applied Linguistics

Bulgaria, Sunny Beach, 4–9 August 2008

Solutions of the Problems of the Individual Contest

## 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<sup>w</sup> ʝ ʝ<sup>w</sup>]) at the beginning of a word or between vowels and as voiceless consonants ([p t c k k<sup>w</sup> x x<sup>w</sup>]) at the end of a word or next to another consonant.

Answers:

(a) 12 [əksən̩xəvən], 13 [ət̩kəbɔx], 14 [gəm̩jəmin], 15 [emtoɣ<sup>w</sup>atk], 16 [dəbəl̩c];

(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  $V_1, V_2, \dots, V_6$ . 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):

### IV

- 1 háð**i** gramr, þars gnúðu,
- 2 geira hregg við seggi,
- 3 (rauð fnýsti ben blóð*i*)
- 4 bryngögl í dyn Skoglar,
- 5 þás á raun fyr ræsi
- 6 (réð eggliuðr) seggir ...

(b) Leftover words: **hœgra**, **smíði**.

### V

- 1 a **ríks** (þreifsk reiddra øxa
- 2 b **rymr** ; knóttu spjór c **glymja** )
- 3 d **svartskyggð** bitu seggi
- 4 e **sverð** þjóðkonungs ferðar,
- 5 þás ( f **hugfylðra** hólða)
- 6 g **hlaut** h andskoti i **Gauta**
- 7 (hór vas j **söngr** of k **svírum** )
- 8 l **sigr** (flugbeiddra m **vigra** ).