



All Ireland Linguistics Olympiad

AILO V, 20 March 2013

TEAM COMPETITION QUESTION BOOK

**Write your team's answers in the
answer book provided**

2 hours

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A. Shaw business

[20 points]

The author George Bernard Shaw (author of *Pygmalion*, which became the musical *My Fair Lady*) saw the use of the Roman alphabet for English as a waste of time – the alphabet simply was not suited to write English.

Shaw left money in his will to the inventor of a new (and better) script for English. Kingsley Read, among many others, entered the competition, and his alphabet was chosen in 1958 as the best response to Shaw’s challenge. Read named his invention the “Shavian Alphabet” in honour of Shaw. Here are some of the rules of Shavian:

- The majority of its characters simply represent an individual English sound. However, a few can be used as abbreviations for a whole word.
- The spelling is based on a rhotic English accent – an accent in which all the *r* symbols are pronounced (such as Irish or American English accents where the word *farmer* is pronounced with two r-sounds).
- There are no capital “letters”.

The table below contains some English phrases and their appearance in Shavian, but not in the same order.

Shavian alphabet		Roman alphabet	
1	ϩ ⒸⒶ ⒻⒸⒶⒶ	A	this is Shavian
2	/Ⓜ ⒻⒶⒻ ⒸⒶⒶ	B	the cat slept
3	Ⓐ ⒻⒶⒻ	C	to learn
4	ϩⒻ ⒻⒶ ⒻⒸⒶⒶ	D	we have cats
5	Ⓐ ⒸⒶⒶ	E	for ever

A1. Match the Roman transliterations with the Shavian phrases. (5 points)

A2. Write the following words or phrases in Shavian. (15 points)

- Eve
- Ian
- turn left to sit
- sleep for Steve

B. The cognate game

[25 points]

Indonesian (Bahasa Indonesia) is an Austronesian Language widely spoken as a first or second language throughout the countries of Indonesia and East Timor. It is closely related to Malay, which is spoken in Malaysia, Brunei, and Singapore. Swahili (Kiswahili) is a Bantu language spoken as a first language by many groups living on the coast of East Africa and as a second language throughout northern and central Africa. These two languages are *lingua francas*, used for trade, business, and education among peoples with different mother tongues. Though they originated on different continents and come from different language families, Indonesian and Swahili share a substantial amount of vocabulary, thanks primarily to loans from Arabic, but also from English, Portuguese, and German/Dutch. While many of these loans are related to commonly-loaned domains such as technology, religion, or animals (compare the Swahili word for 'lion' *simba*, with the Indonesian *singga*), some are for more everyday items such as 'table' (Swahili *meza*, Indonesian *meja*, from the Portuguese *mesa*). Below are three tasks related to identifying Indonesian and Swahili cognates, but be careful: not everything is as it seems!

The following table shows 20 sentences in Indonesian and Swahili; they are not aligned as translations of each other.

Indonesian		Swahili	
1	Aliniuza kitabu	A	Bawakan saya buku-tulisku
2	Dada wangu anajifunza kemia	B	Bawalah buku-buku ke sekolah
3	Hijabu ya dada wangu ni rangi ya bluu	C	Besok Anda ke Mesri
4	Jana nilisoma biblia	D	Di Bahasa Swahili Anda bisa berbicara apa kabar
5	Katika Kiswahili unaweza kusema habari gani	E	Dia menjual saya buku
6	Kesho utakwenda Misri	F	Hari ini hari kamis
7	Kitongoji hiki ni salama	G	Jilbab kakakku adalah biru
8	Leo ni alhamisi	H	Kakakku belajar kemia
9	Leteni vitabu vyenu kwa shule	I	Kemeja adikku adalah hijau
10	Nilete daftari lako	J	Kemejanya di pahanya
11	Nina vitabu kuhusu Wayahudi	K	Ketika hari jumat saya berdoa
12	Ninajifunza biologia	L	Lingkungan ini selamat
13	Ninapenda bendera Kiholanzi	M	Menurut daftarnya Anda miskin
14	Ninasema Kiswahili	N	Saya belajar biologi
15	Orodha hii inasema kwa wewe ni meskini	O	Saya bisa berbahasa Swahili
16	Shati la kaka wangu ni rangi ya kijana	P	Saya membaca al-kitab kemarin
17	Shati lake ni juu ya paja lake	Q	Saya punya buku-buku tentang Yahudi-Yahudi
18	Siku za ijumaa ninaomba	R	Saya suka bendera Belanda
19	Sikuwa na wakati ijumaa	S	Saya tidak punya waktu hari jumat
20	Wilaya hizi ni salama	T	Wilayah-wilayahnya selamat

B1. Match the English sentences listed below with their Indonesian and Swahili translations. For each sentence in your answer book give a number between 1-20 for the Indonesian equivalent and a letter A-T for the Swahili.

Bring me your notebook.
Bring your books to school.
He sold me a book.
His shirt is on his thigh.
I didn't have time on Friday.
I have books about Jews.
I like the Dutch flag.
I speak Swahili.
I study biology.
In Swahili you can say what's new.
My brother's shirt is green
My sister studies chemistry.
My sister's headscarf is blue.
On Fridays I pray.
These districts are safe.
This list says that you are poor.
This neighbourhood is safe.
Today is Thursday.
Tomorrow you're going to Egypt.
Yesterday I read the Bible.

B2. In the data given, there are at least two pairs of “misleading cognates” (false friends) – words in Indonesian and Swahili that have the same roots but have different meanings in English. Find two such pairs, and say what each word means in English. Each answer will consist of an Indonesian word with its English meaning, and a (similar) Swahili word with its (different) English meaning. (5 points)

B3. Translate the following sentences into Swahili and Indonesian: (10 points)

- a. I speak Hebrew.
- b. I like my sister's shirt
- c. He sold me a flag.
- d. Egypt is safe.
- e. He sells me a headscarf.
- f. Today I am reading a book.
- g. In Swahili you can study the Bible.
- h. The Dutch are poor.
- i. On Thursdays I read books.
- j. My brother studies your book.

C. Grice's gadget

[15 points]

A company has brought out a small flying robot that helps you cheat at card games. The robot flies above your opponent's shoulder, looks at their cards, and then telepathically sends you a message into your brain. These gadgets have to abide by the following "maxims":

Relevance (R) What the robot says should be relevant to the player's needs (winning the card game); it should give the minimum number of facts necessary for the player to make the best play possible.

Manner (M) In addition to giving the minimum number of facts necessary, those facts should be expressed as simply as possible.

Quantity (N) It should give all information needed, i.e. it should not leave anything out.

Quality (L) It shouldn't say things that are wrong (otherwise, what's the point of cheating).

Linguists believe that humans follow similar rules.¹ For example, when you ask a friend what the weather is like, they would violate the maxim of quantity (N) if they recited the hourly barometric pressure over the previous three days. We want the robot to communicate like human, so it has to obey the maxims.

Here's the card game our robot is trying to help you to win. Before each round, the dealer shuffles a deck with forty cards, where each card has one of four suits (club ♣, heart ♥, spade ♠, diamond ♦) and a number from 1 to 10. You and your opponent each get three cards. You pick one of the three cards and give it to your opponent. Your opponent gets points equal to the product of the two highest numbers of the same suit (if there are no cards of the same suit, the hand is worth one point). For example:

Opponent's Hand	Your Card	Points
4♥ 3♥ 2♥	1♣	4 x 3 = 12
4♣ 5♥ 9♦	6♣	6 x 4 = 24
4♣ 5♥ 9♦	10♠	1 (no cards of the same suit)

The robot cannot see your cards (it is hovering above your opponent's shoulder), so it needs to give you enough information for you to play the best card no matter what cards you have. For example, if the robot sees that your opponent has 4♣ 3♠ 2♦, it can't just say "play a heart", because you might not have one in your hand.

C1. Defective robot

You have to debug some defective units. Given an opponent's hand and the robot's output, identify the maxims violated (use R, M, N, or L). Each example will violate one maxim. (5 points)

¹ Language is ambiguous. In addition to the ambiguity of syntax and semantics, there are often social conventions that both speakers and listeners assume in a conversation. This was described by the linguist H. Paul Grice in the early 1960s. He proposed that speakers and listeners assume the maxims described in this problem. Because of these maxims, conversation participants are able to make Gricean inferences from incomplete information. For example, if A asks B "Where's Lisa?" and B replies "Lisa has got the flu", the maxim of relevance (R) allows A to assume that Lisa is staying at home *because* she is sick, even though this was never explicitly stated. Identifying and constructing these logical leaps in this restricted environment is the goal of this problem.

	Opponent's hand	Output
a	4♥ 3♠ 2♦	He has a four of hearts, a three of spades, and a two of clubs.
b	4♥ 3♥ 2♥	He has a four of hearts, a three of hearts, and a two of hearts.
c	4♥ 3♦ 2♠	He has hearts, diamonds, and spades.
d	6♥ 7♠ 3♦	He has a six of hearts, a seven of spades, a three of diamonds, and he's feeling pretty good.
e	2♠ 1♠ 3♣	He has an even prime number of spades, and the smallest odd prime number of clubs.

C2. Correcting the robot

Given an opponent's hand, a maxim violated, and the robot's output, replace the **bold** portion of the output with text that would fix the violation of the maxim (without violating any others!). (6 points)

	Opponent's hand	Output	Maxim
a	4♥ 2♦ 3♥	He has a four of hearts, a two of diamonds, and a three of hearts.	Relevance (R)
b	8♦ 2♦ 10♣	He has a ten of clubs and an eight of spades.	Quality (L)
c	8♦ 2♥ 10♠	He has an eight of diamonds and a two of hearts.	Quantity (N)

C3. Playing the game

Given the following statements by a (correctly operating) robot, give a configuration of the opponent's cards that is consistent with the statement and **all** the maxims (if there's more than one possible configuration, just give one). (4 points)

- Don't play a heart.
- He has no hearts.
- He has clubs and hearts.
- He has a three of clubs and a two of spades.

D. Putting the books in order**[20 points]**

Soon after Maya Delgado was hired by accounting giant Jensen & Nakamura, she was sent on a consulting assignment abroad. Once at her destination, she was given two boxes (yellow and green) of statements from Jensen & Nakamura's branch offices in two countries in the region. Each box contained thirteen folders. Maya was quickly able to figure out what the labels on the folders meant. And having done so, she realized that one folder in each box was a fake.

D1. Which are the fake folders in each box? (2 points)

D2. How do you translate the labels of folders 9 and H into English? (2 points)

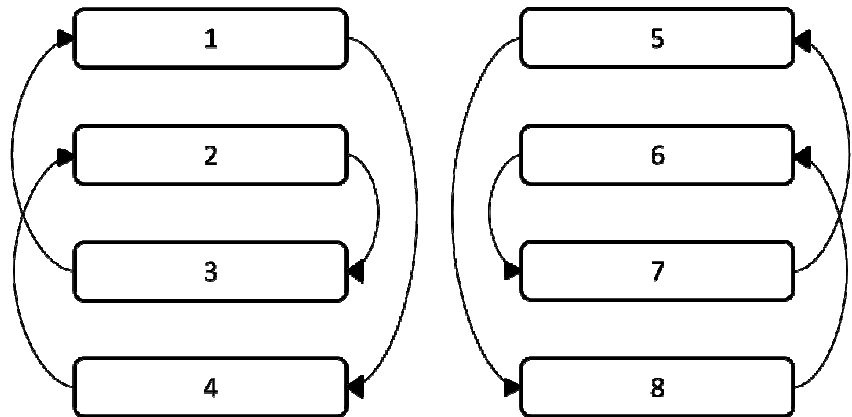
D3. How does each of the (non-fake) folders from the yellow box match a folder in the green box? (12 points)

D4. As you can guess, in the lists shown here the folders are ordered alphabetically. There is a better (more logical) order. Reorder the two lists (minus the fake folder in each case) according to this more logical scheme. (4 points)

Yellow Box	Green Box
1. ივნისი	A. ზინაჰა
2. აპრილი	B. სოქსმქერ
3. ოქტომბერი	C. შარა
4. იანვარი	D. სხაქსმქერ
5. მარტი	E. ზიქსმქერ
6. ნოემბერი	F. ოგუათუ
7. აგვისტო	G. ჟეს
8. სექტემბერი	H. ჟესრქარ
9. მაისი	I. ზესსმქერ
10. თებერვალი	J. საქრქლ
11. დეკემბერი	K. შაქჰა
12. ივლისი	L. ზიქჰა
13. აგტისლისი	M. ზინაქარ

E. Keep it in the family [20 points]

The Warlpiri people in Australia organize themselves into eight different groups, called “skins”. Your skin, which influences your interactions with the Warlpiri people around you, is determined by your parents’ skins and does not change during your entire life. In the diagram on the right, the eight boxes correspond to the eight skins. The horizontal rows indicate marriage correspondences. The arrows point from mother to child.



For example:

If you are in skin number 7, you must marry someone in skin number 3.

If you are a female in skin number 5, then all your children will be in skin number 8.

Below are some statements from members of the Warlpiri community about their family relations. All the information is correct, *including the spellings*. For skin number 1, the males are *Jakamarra* and the females are *Nakamarra*.

“I am Jangala. My daughter is Nampijinpa.”

“I am Nakamarra. My brother’s son is Jupurrula.”

“I am Nampijinpa. My mother’s grandfathers were Jungarrayi and Jupurrula.”

“I am Napangardi. My husband’s sister’s husband’s father’s father’s mother was Napurrula.”

“I am Napanangka. Some of my good friends are Napaljarri and Nangala and Nungarrayi. Oh, you wanted me to talk about my family? Oops.”

“I am Japanangka. My wife’s father’s mother’s brother’s wife’s father’s mother’s brother’s wife’s father’s mother’s brother’s wife’s father’s mother’s brother’s wife’s father’s mother’s brother’s wife was Napurrula. I know my family tree very well.”

E1. What are the female names for the eight skins?

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