

**HSS PhD Entrance Examination  
Linguistics**

**Date:** 19<sup>th</sup> May 2016

**Time:** 9am – 11am

**Total Marks:** 100

**Note:**

- Attempt any two sections. Each section totals to 50 points.
- Verbosity will not be rewarded. Be precise.
- Do not cheat. If you are caught cheating your application will stand canceled.

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**Section 1: Phonetic & Phonology**

I. Using distinctive features, **define** the natural set formed by the following sound. Use all and only those descriptions that are true for the set and order them from least to most specific.

Example: [m, n, ŋ]: This set can be defined with respect to at least four features. [+voiced], [+sonorant], [+consonantal], or [nasal].

1. [m, l, b, a]
2. [f, d<sub>ʒ</sub>, ʃ, ts]
3. [a, e, ə, æ]
4. [p, w, v, β]
5. [s, t, n, l]

[2\*5=10]

II. **Fill** in the blanks

1. Superscript /<sup>h</sup>/ denotes \_\_\_\_\_. (Pharyngealization /glottalization/palatalization)
2. The diacritic /~ / under the symbol denotes \_\_\_\_\_. (nasal/creaky/breathy voice)
3. The diacritic /~ / over the symbol denotes \_\_\_\_\_. (nasal/creaky/breathy voice)
4. A stop /./ between two symbols denotes \_\_\_\_\_. (syllable/ foot/ phrase boundary)
5. The first formant F1 corresponds to \_\_\_\_\_. (vowel height/backness/roundness)

[5]

III. **Explain** with respect to the following pairs, which one is more marked.

1. [+voiced, -sonorant] and [-voiced, -sonorant]
2. Onset and Coda
3. [-Back, +Round] and [+Back, +Round]
4. intervocalic fricative and intervocalic plosive
5. root faithfulness and affix faithfulness

[2\*5=10]

IV. **Write** short notes on any five of the following.

1. Weight-to-stress
2. Weight-by-position
3. Prosodic hierarchy
4. Spirantization
5. Strict Cycle Condition
6. Elsewhere Condition
7. Voice Onset Time
8. Faithfulness constraints DEP and MAX
9. Allophonic variation in your language
10. Liquids as a natural class

[5\*5=25]

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### **Section 2: Syntax & Morphology**

I. Consider the sentence in (1) and answer the questions that follow.

- (1) Which of the papers that he<sub>i</sub> gave Mary<sub>j</sub> did every student<sub>i</sub> ask her<sub>j</sub> to read carefully?
- a) What is the Wh-DP in the sentence? [1]
  - b) What position does the Wh-DP occupy in the S-structure representation of the sentence? [1]
  - c) What position does 'did' occupy in the S-structure representation of the sentence? [1]
  - d) Which condition of the Binding Theory applies to the pronominal 'he' in the sentence? [1]
  - e) Is there a Binding Condition violation with respect to 'he'? [1]
  - f) Which Condition of the Binding Theory applies to 'Mary'? [1]
  - g) Is there a Binding Condition violation with respect to 'Mary'? [1]
  - h) Depending on your answers above, state the level of representation at which the relevant Binding Conditions apply? [1]
  - i) Draw an appropriate tree to show the correct binding relations. [2]

[10]

II. Consider the sentence in (1) and answer the questions that follow.

- (1) \*What do you need to find the professor who can understand?
- a) Draw the D structure representation of the question above. [4]
  - b) Draw the S structure representation of the question above. [4]
  - c) What grammatical principle rules out this question? [4]
  - d) Depict the problematic steps that lead to a violation of this grammatical principle. [8]

[20]

III. Following are the singular and plural nouns in Bulgarian (Cowan and Rakusan 1985: 99). Please don't consider the accent markers

<b>Singular</b>	<b>Plural</b>	
teátər	teátri	'theater(s)'
bóbər	Bobri	'beaver(s)'
pésən	Pesni	'song(s)'
psalóm	Psalmi	'psalm(s)'
báncik	báncigi	'band saw(s)'
ízverk	ízvergi	'monster(s)'

- a) What is the function of the word final morpheme *-i*? [4]  
 b) Vowel deletion is a prominent feature in Bulgarian plural formation? Based on the above data, state the characteristics of the deleted vowels. [6]

IV. Study the following data and answer the question that follows:

Dislike	unwind	report	Distrust
uncover	Recover	recur	Unable
rewrite	unlock	landless	Taller
ex-monk	disallow	penniless	Unhappy
repel	ex-coach	writer	Redraw

1. What are the meanings of the morphemes represented by ex-, dis-, un-, re-, and less? [10]

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### Section 3: Computational Linguistics & Psycholinguistics

I. Examine the following ambiguous context free grammar and answer the questions which follow.

S → Ab | aaB  
 A → a | Aa  
 B → b

- (a) Find the strings generated by the grammar that has two leftmost derivations. Show the derivations. [10]

- (b) Show the two derivation trees for the strings. [5]

- (c) Find an equivalent unambiguous context-free grammar. Also explain why the equivalent grammar is unambiguous. [10]

II. With regard to lexical processing what happens when one encounters an ambiguous word? Does this processing pattern change when the context constrains the meaning of the ambiguous word? Explain using an example.

[10]

III. Consider the following sentences. With regard to processing ambiguity, which phrase/word in these sentences will lead to processing difficulty?

The man saw a postman with a telescope.  
The girl knew the answer was correct.

[5]

IV. Both constraint-based model and the garden-path model predict sentence (a) to be easier than (b). Why?

- (a) He saw the boy in the garden.
- (b) He saw the boy was running.

[10]

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