YOUR NAME:_____

YOUR ID:_____

YOUR TA:_____

No material is admitted except paper and pen or pencil. Remember to write legibly. We prefer brief answers. There is a maximum of 100 Points. The final is worth 20 % of the overall percentage score.

Important Note.

The following exam uses only the sounds of **English** and their corresponding IPA symbols.

Total number of points: 100   Your score: _____

Question 1. (4 Points) Mark the following whether they are minimal pairs or not:

[sɪp] : [sɪn]   ■ Yes □ No

[spɪt] : [pɪt]   □ Yes ■ No

[næp] : [pæn]   □ Yes ■ No

[cæt] : [cæb]   ■ Yes □ No

Question 2. (4 Points) Answer whether the pairs involve the same place of articulation or not:

[k] : [g]   ■ Yes □ No

[t] : [ʃ]   □ Yes ■ No

[n] : [d]   ■ Yes □ No

[l] : [ɹ]   ■ Yes □ No

Question 3. (5 Points) Are the following a natural classes of English phonemes?

The class of all English sounds   ■ Yes □ No

{w, ʍ, j}   ■ Yes □ No

The class of all stops   ■ Yes □ No

{m, d, t}   □ Yes ■ No

{h}   ■ Yes □ No

Question 4. (10 Points) ① Name the components of a syllable:

Answer: Onset, Rhyme: Nucleus, Coda

② Divide the word **Austrian** [ɔːstɹiʌn] into syllables. Justify your choice.

<u>Answer:</u> [ɔː · stɹi · ʌn] or **Au.stri.an**

There is one syllable per vowel; since [stɹit] (**street**) is a word of English, [stɹ] (**str**) is an onset. Hence, the middle syllabel is [stri]. (Accounts on either the spoken form or the phonological form are considered correct.)

③ Draw the structure of each syllable.

$$[_\sigma [_{Rh} [_N ɔː]]] \quad [_\sigma [_O s \quad t \quad ɹ] [_{Rh} [_N i]] \quad [_\sigma [_{Rh} [_N ʌ] \quad _{Co} n]]]$$

Question 5. (6 Points) Below are six claims. Answer yes or no depending on whether they are true or false.

1. Sounds belonging to the same phoneme are allophones (of each other).

   ■ Yes □ No

2. No sound can have more than one place of articulation.   □ Yes ■ No

3. The phonotactics of onsets are the same across all languages.

   □ Yes ■ No

4. [voice] is a laryngeal feature.   ■ Yes □ No

5. In English, [r] and [l] are in complementary distribution.   □ Yes ■ No

6. In English, only vowels can be in the nucleus.   ■ Yes □ No

Question 6. (7 Points) Draw all possible structures (without labels) for a word of the form PREF$_1$-PREF$_2$-STEM-SUF. How many did you find?

<u>Answer:</u> Number: <u>3</u>

$(((\text{PREF}_1 - (\text{PREF}_2 - \text{STEM})) - \text{SUF})$

$(\text{PREF}_1 - ((\text{PREF}_2 - \text{STEM}) - \text{SUF}))$

$(\text{PREF}_1 - (\text{PREF}_2 - (\text{STEM} - \text{SUF})))$

Question 7. (4 Points) Name 2 prefixes and 2 suffixes of English.

<u>Answer:</u> (For example:) Prefixes: **dis** (or **dis-**), **un** (or **un-** etc); Suffixes: **hood**, **ing**

Question 8. (4 Points) Answer the following questions:

1. Prefixes must be added before suffixes.   □ Yes ■ No

2. Prefixes can be added directly to prefixes.   □ Yes ■ No

3. There are only two kinds of affixes: suffixes and prefixes.   □ Yes ■ No

4. English is predominantly suffixing.   ■ Yes □ No

Question 9. (6 Points) Draw the general X-bar schema for coordination.

<u>Answer:</u> $[_{X^n} X^n \quad \text{Con} \quad X^n]$ (listing the cases $n = 0, 1, 2$ is also ok, as well as the trees in place of the rules).

Question 10. (8 Points) Draw the tree structure for the following sentence.

        The cat never sits on the mat.

<u>Answer:</u> $[_{IP} [_{NP} [_{Det} \text{The}] [_{N'} [_N \text{cat}]]] [_I [_{I'\text{-pst}} \quad] [_{VP} [_{Adv} \text{never}] [_{V'} \text{sits} [_{PP} [_{P'} [_P \text{on}] [_{NP} [_{Det} \text{the}] [_{N'} [_N \text{mat}]]]]]]]]]$

Question 11. (8 Points) Draw the tree structure for the following sentence indicating also the movements that took place. (You may use a single tree to do this.)

        Which book did you read?

<u>Answer:</u> $[_{CP} [_{NP} [_{Det} \text{Which}] [_{N'} [_N \text{book}]]]_1 [_{C'} [_C [_{I+pst} \text{did}]_2] [_{IP} [_{NP} [_{N'} [_N \text{you}]] [_{I'} [_{I+pst} t_2] [_{VP} [_{V'} \text{read} [_{NP} t_1]]]]]]]$

Question 12. (8 Points) Let G consist of the X-bar rules for English plus the following rules:

$$N \rightarrow \text{cat} \mid \text{bar} \mid \text{mouse}$$
$$V \rightarrow \text{runs} \mid \text{sees}$$
$$\text{Det} \rightarrow \text{the} \mid \text{a}$$
$$P \rightarrow \text{to} \mid \text{from}$$

Give *one* derivation for the sentence

        the cat sees a mouse

Answer:

IP

I′ VP

NP I VP

Det N′ I VP

Det N I VP

Det N I V′

Det N I V NP

Det N I V Det N′

Det N I V Det N

the N I V Det N

the cat I V Det N

the cat V Det N

the cat sees Det N

the cat sees a N

the cat sees a mouse

Remarks: There are many, many solutions. You may apply the rules in any order, so this one above is only an *example*.

Question 13. (4 Points) Answer 'yes' or 'no' (continued overleaf):

1. If w is a hyponym of v and v a hyponym of x then w is a hyponym of x.

   ■ Yes □ No

2. If w is a hyponym of v then v is a hyponym of w.   □ Yes ■ No

3. No word is a hyponym of itself.   □ Yes ■ No

4. Two words are synonyms iff they are hyponyms of each other.

   ■ Yes □ No

Question 14. (6 Points) Given the following pairs of words, say in each case whether or not one of them is a hyponym of the other (and if so which one) or

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whether they are antonyms. No reasons need to be given.

     (a)   `cat`   `tiger`

     (b) `bird` `sparrow`

     (c) `hot`   `warm`

Answer: (a) (if you read `cat` as "domestic animal called 'cat'":) neither is a hyponym of the other; neither is an antonym of the other; (if you read `cat` as referring to the entire species including lions, panthers and so on:) `tiger` is a hyponym of `cat`, `cat` is not a hyponym of `tiger`, neither is an antonym of the other; (b) `sparrow` is a hyponym of `bird`; (c) neither is a hyponym or an antonym of the other.

Question 15. (6 Points) Here are rules to transform Latin forms into Spanish (# is an end of word marker). (The rule set is not complete!)

(1)   o → ue

(2)   s → es/#___

(3)   us → o/___#

Apply there rules to the following words: `bonus`, `spiritus`, `focus`. Apply them in the order shown.

Rule	bonus	spiritus	focus
(1)	buenus	spiritus	fuecus
(2)	buenus	espiritus	fuecus
(3)	bueno	espirito	fueco

Remarks: No points off if you used `locus`. You have to apply the rules in sequence (*in the order shown*).

Question 16. (10 Points) In the following tree, say which node dominates which node and which node c-commands which node.
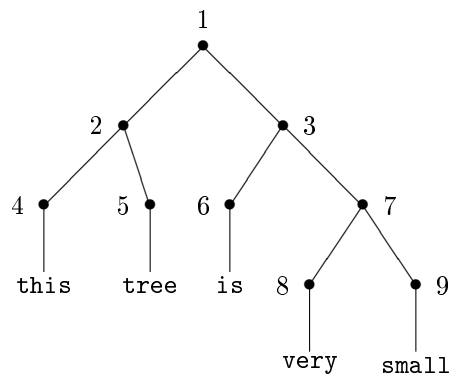
Answer: 1 dominates 2, 3, 4, 5, 6, 7, 8, 9; 2 dominates 4, 5; 3 dominates 6, 7, 8, 9; 7 dominates 8, 9; nothing else. 2 c-commands 3, 6, 7, 8, 9; 3 c-commands 2, 4, 5; 4 c-commands 5; 5 c-commands 4; 6 c-commands 7, 8, 9; 7 c-commands 6; 8 c-commands 9; 9 c-commands 8; nothing else.

Remarks: A list format is also fine; anything that is clearly readable.