Allophonic rules of English

Consonants

You are required to show in narrow transcription that:

- Voiceless stops are aspirated word-initially, and initially in a stressed syllable.
- Approximants are devoiced following an aspirated stop.
- /ɔ + approximant or nasal in unstressed syllable coda position coalesce to a syllabic approximant or nasal. [Syllabic /ɹ/ can be equivalently transcribed as [σ].]

Except

- /t,d/ reduce to [ɾ] between two vowels (or a syllabic consonant), particularly if the second one is unstressed. /n/ reduces to [ɾ] in the same context.
- [Alveolar consonants are laterally released before /l/.] Laterally released /ɾ/ is voiced but not tapped, e.g. in 'little'.
- /ɾ/ becomes [ʔ] before a syllabic /n/. [/d/ is nasally released before a syllabic /n/.]
- /l/ is velarised ([ɫ]) in syllable coda position.
- Alveolar stops, nasals and laterals become dentalised before a dental consonant.
- /h/ becomes voiced [ɦ] non-word-initially.

Italicised items above are added for explanation, but need not be shown in transcription.

Some additional allophonic consonant patterns, which need not be shown in transcription:

- 'Voiced' stops may partially or fully devoiced word-initially.
- 'Voiced' stops and fricatives may partially or fully devoiced word-finally.
- 'Voiced' stops and fricatives have shorter closure/constriction duration than their voiceless counterparts.
- Stops are not audibly released before another stop. They may be unreleased utterance-finally as well.
- Unreleased 'voiceless' stops are preglottalized (because voicelessness is implemented as glottal constriction rather than abduction). Preglottalized /t/ may reduce to [ʔ].
- /t,d/ have a somewhat affricated release before /ɹ/, e.g. [tʃɹ].
- /ʃ/ is rounded prevocally. /ʃ/ is always rounded. All consonants are rounded before a rounded vowel.
- Velar stops are fronted ([k,ɡ]) before a front vowel. Same for the velar nasal.
- In casual connected speech, alveolar stops and fricatives may be somewhat palatalized (and affricated, if a stop) before /ʃ/, e.g. in 'hit you' or 'miss you'.

Vowels

You are required to show in narrow transcription that:

- Vowels are nasalized before a nasal consonant.
• Mid 'tense' (or 'close') vowels /e, o/ are diphthongised to [ɛɪ, ɔʊ] (except for /o/ before velarized /l/, and /e/ before /ɹ/).

• In Western Canadian English, /ɑ/ is rounded ([ɔ]), except before /ɹ/. [This arose from a historic merger between /ɑ/ and /ɹ/]

• In the low-rising diphthongs /ɑɪ, ɑʊ/, the low vowel is central and unrounded: [ɑɪ, ɑʊ].

• In Canadian English, before a voiceless consonant (in the same word), the low-rising diphthongs begin with a raised-low or mid vowel: [ʊɪ, ʊʊ] or [ɔɪ, ɔʊ] (“Canadian Raising”).

• In the diphthongs /ɔɪ/ and /oɹ/, /o/ is 'lax' (or 'open'), i.e. [ɔ].

• In multi-syllabic words, vowels in stressless (not even secondary stressed) syllables usually reduce to schwa, except in very formal speech. Word-final /i/ and /o/ usually do not reduce. [This is not, strictly speaking, an allophonic rule, but a neutralization. Some speakers reduce the high and mid front vowels (/i, ɪ, e, ɛ/) to a centralised allophone of /i/ ([ɪ]) instead of schwa. Details of the stressless reduction pattern are complex, varying somewhat from speaker to speaker. You must listen carefully to the speech you are transcribing to determine whether particular unstressed vowels have reduced to schwa or not.]

• Conversely, schwa (or [ɨ]) is never found in a primary or secondary stressed syllables (except for /əɹ/ which becomes syllabic [ɹ], or equivalently [ɚ]).

Italicised items above are added for explanation, but need not be shown in transcription.

Some additional allophonic vowel patterns, which need not be shown in transcription:

• Vowels are lengthened in an 'open' syllable (not ending in a consonant).

• Vowels are shortened before a voiceless consonant.

• 'Tense' (or 'close') vowels are longer than their 'lax' ('open') counterparts.

• The lower the vowel, the longer it is, all else being equal.

• Vowels are longer if stressed.

• The more syllables in the word, the shorter each vowel (up to 3 or 4 syllables, at which point the shortening maxes out).

• Schwa is extremely short.

• A short vowel may be devoiced between two voiceless consonants, 'potato'

[pʰʊəɹˈtʰeɪɾoʊ].

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1 Some phonetics textbooks distinguish between [ə] ('rhotacised schwa') in unstressed syllables, versus [ɜ] (rhotacized [ɜ]) in stressed syllables. [ɜ] is supposed to be ever-so-slightly lower than schwa (a tiny difference that could be notated with a lowering diacritic rather than a separate vowel symbol), and longer, in English. The latter generalization is subsumed by the observation that schwa is extra short in English, noted below, which could be notated using a shortening diacritic; but for purposes of this course you don't need to show this in your transcription. I therefore ignore this distinction henceforth.
• Particularly in Western Canadian English and certain other dialects, 'lax' vowels are somewhat diphthongised, with a mid-central off-glide (e.g. [ɪə], [ʊə], [ɛə]).
• In many dialects of North American English (but not typically in Western Canadian), /æ/ is diphthongised ([ɛə], [eə], [iə]).
• /æ/ often gets a [ɪ]-like off-glide before [ŋ] and [ɡ]. (And for many Western Canadian speakers, it has merged into /eɪ/ in this context).
• English /u/ is centralised ([ʉ]).