* linguistics → is the scientific study of human language.

→ If I'm sick for what reason, I can't go any doctors and saying I'm sick because they are doctors for skin, doctors for blood, doctor for heart, doctor for eyes → let's suppose that language is like human body so we have arms, legs, eyes → the basic parts of any language there are different parts.

* The Basic parts of langaage:-

1) Phonetics + phonology
   sounds

when we talk about linguisicts, we talk about all languages on the world, so all languages in the world have sounds → It's impossible to find the langaage without sounds

3) morphology → morpheme: units of have mean on language.

* Example: disagrements → How many units do I have a disagrements? 4 units.

4) lexicon → vocabulary (words)
All langage in the world must have words.
↳ It's Possible to find the language withou words

so these words are usually put togather in a certian way in syntax.

[5] syntax → the orgnization of words in the sentence.

* Example:- boy the clever. X
  ↳ The clever boy. ✓

Because we know in syntax in free language in the world must have syntax.

→ In the English language we must have a noun, subject in the beggining, for example:
I teach english

* syntax is the structure of phrases and sentences.

[6] semantics → meaning on the word level or on the phrase level.

the meaning of lingustics is also expand why?
because when say lingustics we expect answers for any things relats to language.

↳ what Part of speech is (in)? preposition
what part of speech is (boy)? noun
what part of speech is (slowly)? adverb.

* Languages are humans postion, only human being have languages, but this usually produce language
→ The meaning of lingustics expanded and we have no feels in lingustics.

Example: coputatation lingustics.

computer + lingustics

→ People started asking do animals have a language? So they started thinking, Animal communications and human communication.
People started to ask why for example why do children learn the first language easly? but we spend years learning the second language and we still make mistakes.

* first language acquisition.
  Second language acquisition.
  ↳ How you has learners learn language.

* Neuro lingustics language → the neur system in the brain that is responsibale for language. (language and the brain).

→ Pragramatics
and something else very important part of lingust is word formation → How we form new words in languages.
For example: use the word google, now people use the world google all the time.

Calls of language (The sounds of language → Phontics and Phonlogy).

→ Phontics: The study of sounds (How to read and write sounds).
* Example: school → How many letters are there in school? 6 letters

How many sounds in school?
[skul] → 4 sounds.

*which part is responsible for producing sounds
→ the oral practe (lips, teeth, tongue ---)

chapter 1 : Phonetics

* **Phonetics** : The study of speech sounds and their physiological production and acoustic qualities. it deals with configurations of the vocal tract used to produce speech sounds (articulatory Phonetics), the acoustic properties of speech sounds (acoustic Phonetics) and the manner of combining sounds so as to make syllables, word, sentences.

→ Sounds
- vowels → free air passage
- consonants → air construction (stopped).

* major differences between vowels and consonants :-
1_ In production of consonants there is usually a some kind of air construction (blockage).
Example : [m] → There is blockage.
but if I say [o] → There is no construction.

→ we have 3 major kinds of phonetics :-
1_ articulatory Phonetics (How to produce sounds)
articulate means → speak, and there are certain words we suppose to know.
2_ acoustic phonetics → physical properties of speech as sound waves, for example : The world bad → 3 sounds = 3 waves.
3_ auditory phonetics → Hearing (How we hear).

→ The vocal cords take two positions :-
they either open or close, when they open (apart) →
they produce what this known voiceless sounds,
but they are close (adjusted) → they produce
voiced sounds.

* voiceless sounds like [f, s]
voiced sounds like [v, z]

* consonant :-
when we study consanant we should take
care of 3 major things, we need to understand
if the sound is voiceless or voiced :
1- state of the vocal folds.
2- places of articulation (where the sounds is produced)
3- manners of articulation (The way).

* Place of articulation :-
1- Bilabials → (Bi = two) labials = upper and
lower lips, the sounds we produce
two lips like [p, b, m, w]
→ [p] which is voiceless
[B] which is voiced.
The two lips in production of [p, B, m] come
together
→ In Production of [m, B] we have a air
construction (the air is completly trapped.
[p, b] : oral sounds
[m, w] : nasal sounds.

→ The velum moves up and down as it moves up and down it moves with the uvula.
In the production of [m] does the production in [b, p]
→ In production in [p, b] the two lips come togather and the same time the air is escape from nasal cavity, but no air comes from nasal cavity so the soft palat is goes up.
[p] → air is trapped inside the mouth then goes out

*Vairous vibrtion in the vocal cords, Is it P or B? If we have vibration → [B] because [B] is voiced.
[M] → Does air escape for any place?
No, the air escpe from the noise
[w] → the sound is up.

2- labiodentals :- upper teeth and the lower lip.
[F] which is voiceless.
[v] which is voiced.
↳ The soft palate is up.

* Note: Every time we close the nostrils and the sound is not affected then it is oral sounds → so the velum is up.

3_ Dentals :_ tounge tip behind the upper front teeth.

→ we have two dental sounds

th < thin (voiceless) θ
     then (voiced) ð

[θ, ð]

4_ Alveolars :_ The front part of the tongue:

[t, d, l, s, z, n, r]

t : in Production of (t) → Does air escape For any Place? NO, So there is complete Closure in the oral cavity and nasal cavity like sounds [P, B]

→ The Tip of the tongue is only alveolar ridge and the same time the tongue side . are in containt in the upper teath

* in production in [t, d] → The velum is up, because if the velum is down the air would escape from the nose.

[t] : voicless

[d] : voiced (vibration)

[l] → the difference between [L] and [t, d]

the sides are not closed → in Production of (L) the tongue sides are down.

Note: Because air escale from two sides, in the english language we call it (the lateral sound) [L] → is the lateral sound (it is the only latreal sound in english, why is the latreal sound?

[L] : which is voiced, the velum is up.
[N] : The tip of the tongue is only alveolar ridge and the tongue sides are in to touch with the teeth, in the production of (N) the Velum is down so the air escapes from the nos (nasal cavity).
→ [t, d, N, L] : The tip of the tongue is on the alveolar ridge and there are differences
[N] : voiced.
[s, z] : we havn't a complete clusure
Because the air escapes and Pushed out
[z], [s] : in the production of (s) there is a neuro Passage, the soft Palat should be up.
[s] : voicless
[z] : voiced.
[r] → in american english is usually rounded like read, ride.....
↳ we are in the same area (the Alvealor ridge), the tongue turns up and downs.
[r] : voiced → the soft palati should be up.

S-Palatals : The palatals sounds should be produce in palatal area (hard Palat), the palatals sounds are: ʃ ʒ tʃ dʒ j

① ʃ → Examples: machine → [maʃin]
she → ʃi
→ shoes, ocean.

ʃ → sh. (voicless)

② ʒ → G, Examples: major, decison
decison → [dIsIʒn]

note: ʒ : this sound does not occur at the beginning of any english word so for example it is not george, this sound occurs at the middle and the end but never at the beginning.

→ How these sounds are produced?
these sounds are Palatals Sounds, so the front of the tongue goes up very close to the hard Palat and this is a neuro passage The air escape from this very neuro Passage so we have distur (oral vocals).

* what is the difference between ʃ and ʒ?

ʃ → is voicless
ʒ → is voiced.

→ should the velars (the soft palat) up or down?
The soft palat is up because an oral sound

③ tʃ → Examples: Chair, church, change, child, choice

* tʃ is only on upper half
→ we have two tongue movements (or two tongue gesture), the first movement is for the (t) and the second movement is for the (sh) → but we see (one sound) and it is a voiceless sound
* what happens in production of tʃ ?
first sound is (t) → the tongue is on the alveolar ridge → then the tongue goes produces t:
takes a movement from t then moves to ʃ

④ dʒ → Examples: Judje, age, wages, Joke

* what is the difference between tʃ and dʒ ?
dʒ → voiced but tʃ → voiceless

* The velum should be up (oral sounds)

⑤ j → A → Examples: east → yeast
ear → year

o → you
s → yes } → different sounds.

they are all produce in this way, but the difference is in production of [A]

* How to Produce [A] ?
it is a Palatal sound still, but the difference in Production of (A) → the space is break (there is a free passage) and still in Palatal area.

6- velars : the back of the tongue is in touch with the velum (soft palat).

[k, g, ŋ] , ŋ → n+g → learning studying.

note: ŋ → at the end of the words

k : is voicless

g : is voiced

→ what is the difference between k, g as one Part and ŋ on other Part ?

Answer: we have vibration and friction → used

How is ŋ Produced?

↳ when the velum is down.

* the soft palat moves and as it moves it tak the uvula up and down with it

→ The difference between n, ŋ :-

n : it is an alveolar sound (The Tip of the tongue is only in alveolar ridge

ŋ : the back of the tongue

7_ Glottal ; The glottis is the space between the vocal folds/cords in the larynx, and the glottal sound in english is [h].

h : there is a friction between the glottals and the air that comes out from the lungs.

[h] : is voiceless.

* manner of articulation (How we Produced sounds) :

1_ stop sounds : in Production of the stop sounds we have a complete air constriction (bockage).

↳ The stop sounds are : [p, b, t, d, k, g, ʔ]

and we also called them (Plosives) → because when we Produced them the air rushes out like a plosion.

2_ Fricatives : fricative sounds there is narrow Passage from which air escapes.

↳ The fricative sounds are : [f, v, θ, ð, s, z, ʃ, ʒ, h]

3_ Affricates : occur at the beginning of the words Cheap and jeep.

↳ The Affricater sounds are : [tʃ, dʒ]

↳ How many gesture are there in introduction of sh and G ? 2 movenments

4_ Nasal : most sounds Produced orally with the velum raised, Preventing airflow from entering the nasal Cavity.

The Nasal sounds are : [m, n, ŋ]

5_ liquids : [L, r] → they are both voiced.
L → latreal sound (latreal = sider).

6_ Glidesi [w, j] → they are both voiced
* Glides + liquid → Approximant

7_ Glottal : [h, ʔ]

8_ flabs : [ɾ, ɾ̃]

* In the english language the [t] sound can produced in different ways.

[t] → [D], [f], [ʔ]

Examples: that → [ðæt], [ðæD], [ðæɾ]

[ðæʔ] → these sounds are represntation of what other sounds of (t).
→ so these 3 sounds D, ɾ, ʔ represent the (t) sound
if I want to write the word (rat), which r should I use?
[r] → liquid because it is original.

* Describe the sounds:-

1_ [p] : voiceless, bilabial, stop.
2 [g] : voiced, velar, stop.

3_ [θ] : voicless, dental, fricative.
4_ [tʃ] : voicless, AFfricate, palatal.

5_ [n] : voiced, alveolar, nasal.
6_ [L] : voiced, alveolars, liquid (lateral liquid).
7_ [r] : voiced, alveolars, liquid.
8_ [w] : voiced, bilabials, , Glide.
9_ [D] : voiced, alveolar, stop, flap.
10_ [d] : voiced, alveolar, stop.
11_ [ʔ] : voiceless, Glottal, stop.

* Vowels :
When we study vowels, we take into consideration 3 Points:
1_ tongue height → (How height the tongue is)
2_ tongue position → (what position is the tongue in)
3_ lips shape

front ← | → back.
centre

→ we have two types of vowels:
1_ monophthongs : mono → one
↳ we have one tongue height, one tongue position, one lips shape
2_ Diphthongs : Di → two
↳ two tongue height, two tongue position, two shape.

* monophthongs :-
1_ /i/ → examples : Seat, dead, beat, eat, we
Seat : [sit] she : [ʃi]

2- /I/ → examples: sit, bin, did

did : [dId]

3- /ɛ/ → examples: Set, dead, Bony, said, bed

dead : [dɛd] said [sɛd]

4- /æ/ → examples: sat, dad, ban, fat, hat...

dad : [dæd] rat: [ræt]

5- /ɔ:/ → Examples: father, heart, Part

6- /ɔ/ → Examples: door, four, born, Caught.

Caught : [kɔt] four : [fɔr]

7- /ʊ/ → Put, should, foot

Should: [ʃʊd] could [kʊd]

8- /u/ → Examples: do, fruit, move, you, food.

fruit: [frut] move: [muv]

you : [ju]

9_ /ʌ/ → Examples : Cut, blood, but, tongue.

cut: [kʌt] tongue: [tʌŋ]

10_ /ə/ → about, above, oven (very short vowel

very short vowel, and we call it schwa.

oven: [ʌvən]

y in the english language always every time you see:

er
or
ar } → at the ends of words.

teacher: [tiːtʃər] sailor [seɪlər]

rectangular: [rɛktæŋgyulər]

That: [ðæt]

* note: _ ŋ+g < g end suffix
ŋg

→ which sound we we : _

1_ fingre : ɪ

2_ teeth : iː

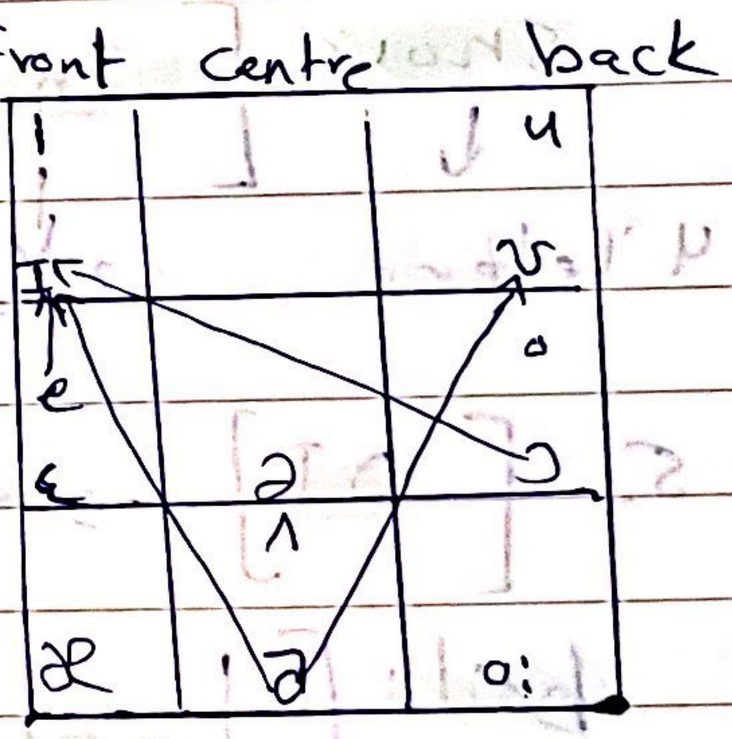
3_ skin : ɪ

4_ key : iː

5- Speak : iː

6_ leg : ɛ

7_ hand : æ



* Diphthongs :-

1- [aɪ] → Examples : buy , try , high , fight , write

fight : [faɪt]

2- [aʊ] → Now , out , how , route .

how : [haʊ] outside : [aʊtsaɪd]

3- [eɪ] → day , say , late

day : [deɪy] late : [leɪt]

4- [oʊ] → snow , stone , go , Code .

show : [ʃoʊ]

4 letters 3 sounds

5- [ɔɪ] → enjoy , oil , boil , noise .

• boil : [bɔɪl] noise : [nɔɪz]

* subtle individual variation :-

↳ this section is about variation (differences in accents)

English has different accents like class → us → klæs

→ uk → klɑ:s

* study questions : 37

[1] what is the difference between acoustic phonetics and articulatory phonetics ?

articulatory phonetics : How sound is produced.

acoustic phonetics : physical properties of speech as sound waves.

[2] which end with (voiced) sounds (+v) and which words end with voiceless sounds (-v) ?

1- bang : [bæŋ] → voiced

2- crash : [kræʃ] → voiceless.

3- ding : [dɪŋ] → voiced.

4- Fizz : [fɪz] → voiced.

5- rap : [ræp] → voiceless

6- smack : [smæk] → voicless

7- splat : [splæt] → voicless

8- thud : [θʌd] → voiced

9- wham : [wɑm] → Voiced

[3] Try to pronounce the intial sounds of the following words and identify the place of articulation :-

1- Calf : [kɑf] → velar [k]

2- Chin : [tʃ ɪn] → Palatales [tʃ]

3- foot : [fʊt] → labioden tal [f]

4- groin : [grɔɪn] → velar [g]

5- hand : [hɑend] → glottal [h]

6- Kneei [ni] → Alevolar [n]

7- mouth : [maʊθ] → bilabials . [m]

8- Pelvis : [pɛlvɪs] → bilabiabs [p]

9- Shoulder : [ʃoʊldɑr] → Palates [ʃ]

10- Stomach : [stʌmɑk] → Alveolar . [s]

11- thigh : [θɑI] → dental [θ]

12- toe : [Toʊ] → alveolar [t]

4] identify the manner of articulation of initial sounds

1_ Cheery : [ʧiri] → Affricate

2_ Crazy: [kreIzi] → stop

3_ dizzy : [dIzi] → stop.

4_ funny : [fʌni] → fricative.

5_ Jolly : [ʤoːli] → Affricate

6_ loony : [luːni] → liquid

7_ merry : [mɛri] → Nasal

8_ silly : [sIli] → fricative.

9_ wimpy : [wImpi] → glide

5] which written english words are usually pronounced

1_ [baIk] : bike

2_ [bɔt] : bought

3_ [enʤɔi] : enjoy.

4_ [feIs] : face

5- [hɑrl] : hawl.

6- [hoʊpɪŋ] : hoping

7- [hu] : who

8- [klʊk] : cloak

9- [mɑɪn] : main

10- [kju] : queue or Queue →

11- [tʃip] : cheap.

12- [ðə] : the

6 using symbols introduced in this chapter, write basic phonetic transcription of the most common pronounciation!-

1- catch : [kætʃ]

2- doubt : [dəʊt]

3- gem : [dʒɛm]

4- measure : [mɛʒər]

5- noise : [nɔɪz]

6- phone : [foʊn]

7- shy : [ʃaɪ]

8- these: [ðiːz]

9- thought : [θɔːt]

10- tough: [tʌf]

11- would: [wʊd]

12- wring: [rɪŋ]

Examples:

1- sun, son : [sʌn]

2- bought: [bɔːt]

3- boat: [boʊt]

4- cold : [koʊld]

5- called: [kɔːld]

6- caught: [kɔːt]

Chapter 2: phonology

* Phonology: The study of sound patterns. It is the study of the organization of sound in language.
  ↳ some sounds in different languages of the world can have different patterns (forms).
  ↳ Phonology in general looks into vairiation (differences in speech) and some sounds in the different langage in the world may have a different representions (forms).
  Example: The sound [t] can be [tʰ], [D], [ʔ], [ʔ].

* In the English language when we have a voicless stop sounds → [p], [k], [t] → when they come at the beginning of the word and there is a vowel after them like: Pen, tan, Cake
  Pen: [pʰɛn], tan: [ˈtʰæn], Cake: [kʰeɪk]
  ↳ we usually add aspiration which is a small puff of air like the [h], only in this three sounds.

* We call this small symbol → diacritic symbol
  so we use diacritic symbols which indicates aspiration in the english language sometimes when [t] comes at the beginning of the word and it is followed by vowel the [t] has aspirated like cake, two,
  two: [tʰu], city: [sɪDi] or [sɪʔi]
  that: [ðæt] or [ðæʔ], kitten: [kɪtən] or [kɪʔən]
  ↳ the [t] sound has different patterns/Sound, but these different sound all means [t].

Phonology: it is the mental knowledge of sounds.
↳ mental knowledge means: if we hear somebody saying I live in the city → my mind takes me to [t] (in mind).

* The study of organization of sounds in language:
all languages have sounds, but we are not free to put these sounds together.
↳ Example: romoing → [romɔIŋ] → this word is not english. (this is a diphthong).
note: [Iɔ] → this sound does not occur at the beginning of any english word.
in english language it is impossible to find any diphthongs before [ŋ]

2- Phoneme: is a sound, but this sound creates a difference in meaning when change, so Phoneme is (distinguishing) sound or distinctive.

Example: rat [ræt] if I change the R to C →
Cat [kæt]
↳ Does the word rat mean cat? No, so we change the sound the meaning changes → this phoneme is (distinguishing sound).

How many phonemes do we have in rat: 3 sounds because everyone of them is a Phoneme.
Example: rang: [ræŋ], root: [rut]
↳ so we change [æ] to [u] → when we change the sound the meaning change (Phoneme)

3- allophone : is a different Pronunciations for the same Phoneme.

Example : [t], can be aspirated [dˡ], [pˀ], [tˢ].

So if we change [t] to [d] like city → [sɪti], [sɪdi] or that → [ðæt], [ðæd] → the meaning does not change, so the allophone is not distinguish.

↳ why does not change? we go to mental knowledge my mind tells me in english language the [t] can be d, ɾ, ʔ.

(allophoes are sounds that are not distingushing.

phone : is a unanalyzed sound (this sound can be a phoneme and can be an allophone

↳ if we hear the sound [d] → this sound can be an actual sound like dead [dɛd] or can be an [d] in the word [sɪdi].

we describe phoneme, for Example: [t] → voicless, alveolar, stop → we can describe this sound in (Binary features) → [t] : - voice/voiced, alveolar, stop.

↓

+ so if I say +bilabial (incorrect) because is not bilabial, it is alveolar, or if I change stop to + fricative → (incorrect) but - fricative is correct (stop).

Example 2 : [i] → +front, -high (incorrect).

[i] : +front, +high (correct).

*Phonemes in relation to allophones :-

1- asPrition [ʰ] → we call asPrition as a symbol diacrities

2- dental articalation : [n̪].

↳ Example: ten[tɛn] → alveolar sound :

tenth: [tɛnθ]

n → dental

ten: [tɛn]
tenth: [tɛnθ] → what is the relationship between two(n)?
They are allophone (different pronounciations for the same sound)
what should we have for the [t] because it is followed by vowel → we have should asprition.
→ allophone.

Example: well : [wɛl] → Alveolar.
welth: [wɛlθ] → dental articulation.
should we have asprition for [w] ? no, because it is not a stop sound. (only p, t, k).

wide : [wɔɪd] → alveolar.
width : [wɪdθ] → dental articulation.
↳ what is the relationship between two(d)?
Allophone.

3_vowel nasalization : [~]
↳ Examples: ran: [rɛ̃n]
room: [rũm]
ring: [rɪ̃ŋ]
in this Exampels we have nasal sounds [n], [m] [ŋ]
↳ what come Precede them? vowels.

note:- all vowels are oral, but when we have a vowel precede the nasal sound → the vowel becomes nasalized.
ran: [rɛ̃n]
t: [ɛt] } They are (allophone).

room: [rum] ⌡ allophone.
tow: [tu] ⌡

* when we talk about dental articulation sometimes we have dental articulation not necessarily in the same words for example: in the: [ɪnðə]

4_ minimal pairs: two words that are identical in everything but they different in one sound.
↳ Example: two, tee → when we change the [w] the meaning changes.
pray, bray → minimal pair.

minimal set: more than two words that are identical in everything but different in one sound.
like for Example: rat, hat, cat, sat, bat, fat.

5_ phonotactics: is permitted/accpeted/allowed organiction of sounds in any language.
↳ for example: [ʒ] does not occur at the beginning
[h]: never occur at the end
Example: fsig → not an english word.

* phonotactics is a field in linguistics that looks into how we organized sounds
↳ what sound acceptable but not is english word
ftS: fsar.

-Example: in English if we have any word that has three consnants at the beginning of any english word → there three consnants have to be (s, p, t, k) or aproxments (l, r, w, j)

(p, t, k) voicdess stop.

⇒ splash, spray, strong, street, strong, strange —— if we find the word for Example:

blash → is not acceptable because the first is not [s]

smlash → is not acceptable because the second one should be a voicless stop.

*phonotactics: what is ①acceptable, what is not ②acceptable in the organistion on putting the sound together.

6_ syllabels: must contain a vowel or vowel like sound, including diphthongs/ either word or Part of word.

Example: _ Cat: 1 syllabel.

Cheap: 1 syllable.

table: 2 syllables.

Computer: 3 syllabels.

Come: 1 syllable.

⇒ syllabels are usually provided into 3 parts

1_ syllable.

2_ onset. (beginning).

3_ rhyme.

if we have the word cat/cheap.

Cat: [kæt] 1 syllable. open syllable.
table: [teɪbəl] 2 syllabels → (does not have coda).
important: [ɪmpɔrtnt] 3 syllables → the first syllable is not have onset, the second syllable has ryhme
brands: [brænd2] 1 syllable,
Note: If we have 1 vowel this means we have only one syllable.
eye: [aɪ]. 1 syllable.

↳ A syllable usually consent of 3 parts but it does not mean that we should have a 3 parts all the time. Sometimes we have them, sometimes we don't have onset, sometimes we don't have a coda, but we must have nucleus.. (vowels).

* for example: In: [ɪn] → don't have onset
to: [thuː] → aspiration (h) → don't have a coda.

* Two Kinds of syllabels:
1- open syllabel: doesn't have coda, Example: tea: [tiː]
to: [tuː] → End with vowels
2- closed syllabel: any syllabels has coda, Example:
Cat: [kæt] → end with consanant.
table: [teɪbəl] → closed syllable
Ipmortan: [ɪmpɔrtnt] → closed.

note: we can delete the onset and coda, but nucleus must never be deleted.
↳ The nucleus and coda are called (ryhme).

Syllabels

rhyme (end, last)

(beginning) onset

(consonant)

nucleus (vowel)

coda (consonant)

onset	nucleus	coda
k	æ	t
tʃ	ɪ	b
t	i	
b	eɪ	
p	ɔ	
f	æ	b
str	i	t
br	æ	ndʒ
_	ɪ	_
t	ɹ	n

*Consonant Clusters:

cluster: include consonant and vowels.

clusters: [kɪkstəɹz] → How many syllabels? 2 syllables

Co ticulation: 6 syllabels.

[kɪkstəɹz] → Are the 2 syllabels in clusters closed or open? closed syllabel.

Coarticulation: [kɔ.ˌɑ:rtɪk.jʊ.leɪʃən] → 6 syllabels.
C V C C C V C V C V C V C → open syllabel

Important: [ɪm.pɔr.tənt] → 3 syllabels.
V C C V C C V C C

Cluster → sound c+v
→ consonant.

consonant cluster: is only about consonant.
phonotactics: sounds organistions.

s	p	l	splash [splæʃ]
	t	r	spring [sprɪŋ]
	k	w	street [strit]
		j	square [skwɛr]

*Cluster: one consonant is next to the other.
if we have a chain of consonants at the beginning of any english word, if we have three consonants → must be [s], voiceless stop [p,t,k] and approximant [l,r,w,j]

* Coarticulation effects:

Coarticulation: How different sounds that follow each oth affect each other, so at the end they become simila they are different but because they affect each other they become similar.

Example: add two → [æd tu]
[æt tu] → Assimilation

why is the d become t ? affected by d
How does affected ? we articalate 2 different sounds in one way.

[d] : voiced
[t] : voiceless

→ the [t] affected [d] so [d] is voiced becomes [t] voiceless , so both of them become voiceless

Example : I have to go.

[h æ v t ə]
voiced ↓ ↘ voiceless

[h æ f t ə]

so the [t] affects the v and the v becomes voiceless.

tən → place of articalation is (alveolar.)
tənθ → place of articulation is (dental.).

→ so both of them become dental , we have differeal sounds that become similar → they have the same thing (coarticulation).

Example : I can go

[ɑI kæn goʊ] → [ɑI kæŋ goʊ]
alveolar. ↙ ↘ stop(velar)

The [g] affects the [n] and the [n] becomes [ŋ]

Can: [kæ̃n]
↳ what happen to the vowel if it is followed by a nasal sound?
it becomes a nasalized vowel (vowel nasalization)
[u]: is a rounded vowel.
[t]: is not rounded.

- Coarticulatin effects have 2 kinds :-
1- Assimilation : milting (becoming one) → two different things become together and then we have one thing.
2- Elision : deletion → in the english language sometimes as we speek we delete sounds.

↳ Example ① : you and I
[ænd]
[æn]

- Example ② : twenty → [twɛnti] or [twɛni] delet t
(c v)
→ this deletion called coarticulation.
Example ③ : friendship : [frɛnʃIP] → delete d (consonant)
(c c)
must be : [mʌs bi] or [mʌst bi]
family : [fæmli] → delete a (vowel).

Rule : in the english language we often delete [t, d] when they are between 2 consonant like friendship, first floor, already.
(c c)
→ so in elision we delete consonant and vowel

* Normal speech :-

Normal speech is any kind of speech which usually has assimilation and elision. so it is very normal to hear people deleting sounds and asmilating sounds.

* study questions :-

1- what is the difference between a Phoneme and an allophone ?

Phoneme : it is a sound that is creates a difference in meaning when change (distinguishig sound) like kill, Cool.
allophone 2 is a different pronunciation for the same Phoneme.

2- what is an aspirated sound and which of the following words would normally be Pronounced with a e: kill, Pool, skill, sPool, stop, top ?

^{h}kill, ^{h}Pool, ^{h}top

3- which of the following words would be treated as minimal Pairs ?
ban, fat, Pit, bell, tape, heat, meal, more, Pat, taP, Pen
Chain, vote, bet, far, bun, goat, heel, sane
tale, vet.

Answer: fat, Pat.
note, goat.
heat, meal.
vet, bet.
bet, vet.
Chain, sane
ban, fat
bun, ban.
tape, tale.

4- what is meant by the phonotactics of a language

phonotactics: the allowed organization of sounds.

5- what is the difference between an open and closed syllables.

open syllable: does not have the coda at the end
closed syllable: does have the coda at the end and the code is a consonant like: up

6- which segment in the pronunciation of the following words are most likely to be affected by elision?
1- government 2- Postman 3- Pumpkin 4- sandwish
- victory.

answer: government → the [n] is delateel.
Pumpkin: Pumkin → the [P] is delateel.
sandwish: sanwish → the [d] is delateel.
victory: victry → the vowel is delateel.