

CHAPTER-02

PHONETICS

1. Basics of Phonetics
2. English Sounds
3. What is Phonetics?
4. Branches of Phonetics



I. Basics of Phonetics

1. What is Phonetics?

Phonetics is a branch of Linguistics; it is the study of sounds.

2. What do we mean by the study of sounds?

By the study of sounds we mean three things:

- (a) How sounds are produced? (Field of Linguistics)
Articulatory Phonetics
- (b) How sounds are transmitted? (Field of Physics)
Acoustic Phonetics
- (c) How sounds are received? (Medical Field) Auditory Phonetics

3. What is Articulatory Phonetics?

Articulatory Phonetics is that branch of Phonetics which deals with the articulation or production of sounds.

4. What are the Kinds of Sounds?

Sounds are of two kinds:

- (a) Consonant Sounds - These are sounds which are produced with some obstruction in the mouth. For example /p/, /b/ (we close both the lips and then release the sounds).

- (b) Vowel Sounds - These are sounds which are produced without any obstruction in the mouth. For example /a:/, /i:/.

5. What is a phoneme?

A phoneme is the minimum unit of sound. To show a phoneme, we write the sounds within the slanting lines

or slashes. For example:

p ----- a letter (پ)

/p / - a sound (پ)

(Note: If we add aspiration /h/ to some phoneme

especially /k/, /p/, /t/, the phoneme is called allophone.

/th/.

*one movement of tongue
complete*

6. What is a syllable? ✓

A syllable is a unit of sound higher than the phoneme (more than one phoneme). Every syllable must have a vowel sound in it. For example, manliness: / m{ n l l nes/. (Three syllables with one vowel sound in them)

The structure of a syllable is

C₀₋₃ V C₀₋₄

C = Consonant

V = Vowel

7. What are articulators?

Articulators are those organs of speech which we use to produce various kinds of sounds, for example, lips, teeth, tongue, nose, palate.

8. What is stress ?

As English is a time-stressed language, some syllables in word and some words in a sentence are uttered with a force of breath. It is called stress. The stress is indicated by a vertical short line before the stressed syllable.

For example:

Father -- /'fa: D@ /

I've a 'book.

II. What is Phonetics?

Phonetics is an area of study in Linguistics. According to David Crystal: "Phonetics is the science of human speech sounds." The objects of the study of phonetics are called phones. Phones are actual speech sounds as uttered by human beings. The smallest meaningful unit of sound is called Phoneme. Phonemes are transcribed within two slanting lines, for example /p/ , /b/ , /t/ , /d/. As the scientific study of the

characteristics of human speech sounds, it discusses how speech sounds are classified, produced, described, and transcribed.

Three Functions of Phonetics

1. Classification and Production of Sounds:

There are two types of sounds: Consonant Sounds, Vowel Sounds. Consonant sounds are sounds which are produced with some obstruction in the mouth. For example, while producing /p/ or /b/, we close the lips and then release the sound. Vowel sounds are sounds in which the air stream from the lungs is not blocked in any way in the mouth or in the throat. For example, while producing /I/ , /i/ , /e/ we feel no obstruction in the mouth.

2. Description of Sounds:

While describing a sound, we use different parameters. In the description of consonant sounds, we use three parameters:

- (a) The Place of Articulation
- (b) The Manner of Articulation
- (c) Voiced or Unvoiced

All vowel sounds are voiced. In the description of vowel sounds, we use two parameters with reference to the position of tongue:

- (a) Front---Back (front or back of tongue)
- (b) Close---Open (near or away from palate)

3. Transcription of Sounds:

Transcription means a method of writing down speech sounds in a systematic and consistent way. In phonetics, we use special symbols to represent sounds. The basic principle is that one symbol should represent one sound only. In English, there are 26 letters (5 vowels and 21 consonants) but 44 sounds (20 vowel sounds and 24 consonant sounds). So we need some extra symbols. Phonetic Transcription is usually written in the International Phonetic Alphabet (IPA), in which each English sound has a special symbol. For example, the phonetic transcription of ship is /Slp/.

Three Main Areas of Study:

1. **Articulatory Phonetics** deals with the way in which speech sounds are produced. Sounds are usually classified

according to the position of the lips and the tongue, how far open the mouth is, whether or not the vocal cords are vibrating.

2. **Acoustic Phonetics** deals with the transmission of speech sounds through the air. When a speech sound is produced it causes minor air disturbances (sound waves). Various instruments are used to measure the characteristics of these sound waves.

3. **Auditory Phonetics** deals with how speech sounds are perceived by the listener.

2. **Branches of Phonetics**

Phonetics is the scientific study of the characteristics of human speech sounds, and it provides methods of its description, classification and transcription. As it attempts to answer three questions:

- (a) How sounds are produced?
- (b) How sounds are transmitted?
- (c) How sounds are received?

Ship / SLP

it has three major branches:

- (a) Articulatory phonetics
- (b) Acoustic phonetics,
- (c) Auditory phonetics

(a) **Articulatory Phonetics :**

It is the most highly developed of the three branches. It is concerned with the positions and movements of the lips, tongue, and other speech organs in producing speech. It analyses how the various speech sounds are articulated by vocal organs. In this branch of phonetics, the phonetician is interested in the way in which the air is sent in motion in the movement of the speech organs and the coordination of these movements in the production of single sound and the sequences of sounds. As regards consonant sounds, it describes the place of articulation (lips, teeth, roof of the mouth, position of tongue) and the manner of articulation (complete stop, partial stop, release, friction). It also tells whether a sound is voiced or unvoiced. As regards vowel sounds, it classifies them according to the height of the tongue, part of the tongue involved, and position of the tongue.

(b) Acoustic Phonetics:

This branch of Phonetics is the most 'technical' of all disciplines. It is concerned with the properties of the sound waves. It studies the physical properties of speech sounds as transmitted between the mouth and the ear. Here the phonetician is interested in the way in which the air vibrates between the mouth of the speaker and the ear of the listener. Transmission of the sounds through the air is discussed in terms of pitch (highness of tone), frequency (speed of sound waves) and amplitude (extent of sound waves).

(c) Auditory Phonetics:

This branch of Phonetics is the study of the human hearing system, the anatomy and physiology of the human ear and brain. It is concerned with the perception and recognition of sounds by human ear. It focuses on the way in which sounds are heard and interpreted. In this process, ear, auditory nerve and brain are involved. The speech sounds reach the listener's ear. Through the auditory nerve, the ear sends these sounds to the brain. The mind interprets these sounds and the message is said to be received.

III. English Sounds & Symbols (International Phonetic Alphabet)

24 Consonant Sounds

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Symbols	Urdu Sounds	Sound in English Words
p	پ	pin , pad , paw
b	ب	bat , big , bit
t	ٹ	tea , tell , take
d	ڈ	day , dear , doll
k	ک	key , cat , cholera
g	گ	get , gap , garden
tʃ	چ	chain , cheat , chat
dʒ	ج	jam , gell , gentle
f	ف	fast , food , fat
v	و (اوپر کا دانت ہونٹ پر)	van , valley , value
θ	تھ ، ٹ	three , thick , thin
ð	ڈ ، ذ	this , these , they
s	س	sing , say , system
z	ز	zero , zebra , zoo
ʃ	ش	shine , patient , nation
ʒ	ژ	pleasure , vision ,
h	ہ	hat , high , hold
m	م	money , mob , mat
n	ن	name , night , near
ŋ	انگ (نون غنہ)	bring , sing , king
l	ل	light , lake , lay

r	ر	reader, rat, right
j	ی	yes, year, yellow
w	و (ہونٹ گول)	wet, waggon, war

20- Vowel Sounds

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Symbols	Sound in Urdu	Sound in English Words:
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Pure Vowels: Monothongs

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✓ i:	ی	seat, need, feet	
✓ I	زیر کی آواز	sit, bit, fit	one
e	اء	bed, said, men	Se
✓ æ	اے	man, can, rat	
✓ a:	آ	cart, bark, star	a 10
ʌ	زیر کی آواز	bud, cut, mud	4 -
ɔ:	او۔و	board, cord, worn	
ɒ	او	lot, dog, cough	
ʊ	پیش کی آواز	pull, put, wood	
u:	لمبے پیش کی آواز	pool, mood, soup	
ɜ:	ا (ر)	bird, girl, first	
ə	مختصر زیر کی آواز	away, again, above	

Gliding Vowels: Diphthongs

ai	آئی	time, mind, sky	Q
au	آؤ	now, cow, town	
ei	اے	late, rate, fate	mini
əʊ	او	go, so know	+
ɔɪ	او۔آئی	boy, toy, join	8
ɪə	اے۔ا	here, fear, dear	
eə	اے۔ا	hare, chair, care	
ʊə	ا۔ا	poor, sure, tour	

Note:

1. The following letters are not used as symbols:

c o q x y

2. The following letters are used in their original sounds:

b d f g h k l m
n p r s t w v z

*beautiful
eye*

*/tʃeɪtʃ
/bɪn/*

PRACTICE

Phonetic Transcription	Word	Phonetic Transcription	Word
/ʃi:t/	sheet	/tʃi:t/	cheat
/ði:z/	these	ðis	this
/θri:/	three	/vɪʒn/	vision
/laɪt/	light	/jes/	yes
/tʃɜ:tʃ/	church	/dʒæm/	jam
/brɪŋ/	bring	/dʒʌdʒ/	judge
/kau/	cow	/əweɪ/	away
/pu:l/	pool	/pul/	pull
/bɔɪ/	boy	/səʊ/	sow
/feə/	fare	/fiə/	fear
/kɑ:t/	cart	/ʃʊə/	sure
/bʌd/	bud	/bɜ:d/	bird
/ri:də/	reader	/leɪt/	late
/steɪdʒ/	stage	/get/	get
/θɪŋk/	think	/sɪŋk/	sink
/ju:/	you	/zɪərəʊ/	zero