

Phonetics

There are 44 phonetic sounds in English out of which 24 are consonant sounds and 20 vowel sounds. Vowel sounds are further categorized into two types being diphthongs and mono thong:

Consonants

Voiced/	voiceless
(15)	(9)

vowels

pure vowels / diphthongs	
(12)	(8)

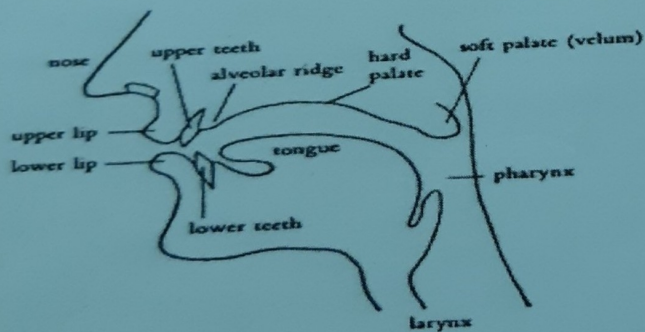
Speech Mechanism and Organs of speech:

A sound is produced when there is some obstruction in the air. When the air is puffed out the lungs some sounds are produced. Besides human beings animals and birds also produce some sounds but we cannot call them speech sounds. A set of utterances that conveys a meaning is called a speech sound.

Production of Speech sounds:

To produce a speech sound the air coming from the lungs is blocked by making obstructions in the vocal tract. The obstructed air is redirected in a planned way in the vocal cord for the production of the speech sounds.

Organs of Speech:



1. Respiratory system: the lungs, muscles of the chest, trachea.
2. Phonatory system: the larynx, and the vocal cords.
3. Articulatory system: the lips, tongue, teeth, the alveolar (teeth ridge), the roof of the mouth (the hard palate and the soft plate) and the uvula.

phonemes

The sound system of a language is a subject of a vast repertoire of speech sounds produced by human beings. To be specific, a phoneme is an abstract and the smallest (minimal) contrastive unit of a speech sound. A phoneme therefore is capable in defining the meaning of words. F.g. by altering K and M for it in tap we get the words map and cap.

Voiced sounds:

When the vocal cords are vibrated and felt in the throat is called a voiced sound as b/d/n/l/w/z etc.

Unvoiced sound:

The sounds are voiceless when there is no vibration during their production as p/t/k/s/sh/ch/ etc.

Accent:

The great stress put onto a syllable. Photographer has stress on the second syllable. Photographic has on the third.

Syllable:

A word can be divided into syllables. Each syllable is a sound that can be said with an interruption and usually a vowel which can have consonants before or after it. Elevate el-ev-ate: A closed *syllable* is a syllable which ends with a consonant (in writing; for example "writ" in "writ-ten" is a closed syllable). There are monosyllabic, disyllabic and polysyllabic words:

Vowel sounds:

Vowel sounds are such sounds which are articulated without any obstruction in an air passage. It is basically a voiced tone. Vowel sound is produced when:

1. The vocal cords are put into vibration by the air stream that comes from the lungs and passes through the glottis.
2. There is no obstruction or compression of air at any point above the glottis, and
3. There is no narrowing in the pharynx and the mouth that would cause audible friction.

Vowel sounds are produced with the help of the tongue. The positioning of the tongue in the mouth affects the articulation of vowels. On the basis of the tongue position vowels can be classified as front, central and back vowels.

Front Vowels: During the production of the front vowels, the tip of and the front of the tongue is raised towards the hard palate and the lips are spread or remain in neutral position. /i:/ as in eat, /i/ as in sit, /æ/ as in sat, /e/ as in pet.

Central Vowels: During the production of the central vowels, the central part of the tongue is raised towards the hard palate and the lips remain in neutral position. Eg. /ʌ/ as in cup and /ɜ:/ as in bird.

Back vowels: During the production of back vowels the back of the tongue is raised towards the soft palate. /ɑ:/ as in heart, /u/ as in book.

List

Sr. No	IPA	English	Transcription
1	æ	Cat	/kæt/
2	ɑ:	Car	kɑ:/
3	ɒ	Hot	/hɒt/
4	ʌ	Cup	kʌp/
5	ɛ	ten	/ten/
6	ɪ	Slip	/slɪp/
7	i:	Sleep	sl i:p/
8	ɔ:	Bored	b ɔ:d/
9	ʊ	Book	/buk/
10	u:	Boot	/bu:t/
11	ə	After	A:ft ə/
12	ɜ:	Bird	/b ɜ:/
13	ɪə	Beer	/b ɪə/
14	ɛə	Bear	/b ɛə/
15	ʊə	Poor	/p ʊə/
16	ɛɪ	Say	/s ɛɪ/
17	aɪ	High	/h aɪ/
18	ɒɪ	Boy	/b ɒɪ/
19	əʊ	No	/n əʊ/
20	aʊ	cow	/k aʊ/

There are 20 vowel sounds out of which 12 are pure vowels (monothongs) and 8 are diphthongs.

Diphthongs:

Diphthongs are those vowel sounds during the production of which the tongue take a glide towards the other. A diphthong consist of a single syllable and it is performed with a single impulse of the breathe. Whereas two vowels have two separate syllables and they are not diphthongs. Fg. Doing has two syllables and the word boy has a single syllable so it a diphthong, /boi/. So diphthongs are two vowel sounds set together in the same syllable.

What is a Triphthong?

A triphthong is diphthong followed by **schwa (shwa) / ə/**. Whereas a diphthong occupies one syllable, a triphthong is a sequence of a diphthong followed by monothong/ / ə/. Power/ pauə/, prayer / preiə/ etc.

What is a consonant sound?

A speech sound that is produced by partly or completely stopping the flow of air breathed out from the mouth. The air does not escape through the mouth freely and continuously. It is an articulation which can be sounded only with the help of vowel sound. In other words it is a letter that represents a sound which is produced by a stoppage of the breathe. The consonants are classified on the basis of voicing place of articulation and manner of articulation. The consonants are identified on the basis of the following:

1. The state of the glottis.
2. The position of the soft palate (velum)
3. The articulators involved.
4. The nature of the articulation.

Classification of consonant sounds:

Sr. No	IPA	Word			
1	p	Pin	Voiceless	Bilabial	Plosive
2	b	Bat	Voiced	Bilabial	Plosive
3	t	Ten	Voiceless	Alveolar	Plosive
4	d	Dance	Voiced	Alveolar	Plosive
5	k	kite	Voiceless	Velar	Plosive
6	g	Girl	Voiced	Velar	Plosive
7	tʃ	Chin	Voiceless	Palato-alveolar	Affricative
8	dʒ	Join	Voiced	Palato-alveolar	Affricative
9	f	Fan	Voiceless	Labio-dental	Fricative
10	v	Van	Voiced	Labio-dental	Fricative
11	θ	Thin	Voiceless	Dental	Fricative
12	ð	That	Voiced	Dental	Fricative
13	s	Sing	Voiceless	Alveolar	Fricative
14	z	Zip	Voiced	Alveolar	Fricative
15	ʃ	Ship	Voiceless	Palato-alveolar	Fricative
16	ʒ	Pleasure	Voiced	Palato-alveolar	Fricative
17	h	Hen	Voiceless	Glottal	Fricative
18	m	Mother	Voiced	Bilabial	Nasal
19	n	Noon	Voiced	alveolar	Nasal
20	ŋ	King	Voiced	Velar	Nasal
21	l	Love	Voiced	alveolar	Lateral
22	r	Red	Voiced	Post alveolar	Semi vowel
23	w	Weight	Voiced	Bilabial	Semi vowel
24	j	Yes	Voiced	Palatal	Semi vowel

Terms to be remembered:

1. Plosive: (stricture of complete closer of oral as well as nasal passage)
2. Affricative (the air coming out of the lungs is obstructed at some point in the oral cavity)
3. Fricative (the active articulators are brought so closed to the passive articulators)
4. Nasal (the air coming out of the lungs is obstructed at some point in the oral cavity the soft palate is in its lower position)
5. Semi vowel (the active articulators are brought so closed to the passive articulators but the space between them is wide enough for the air to escape without any audible friction)
6. Lateral (there is a contact between the active articulators and passive articulators)
7. Active articulators: the active articulators move from their position towards the passive articulators. Since only the lower jaw is movable, the active articulators are located in the lower jaw like teeth, lower lip, and tongue. But the soft palate works as an active and passive articulator:
8. . Bilabial: upper and lower lip involved. **P.b.m.w**
9. Labio-dental: the lower lip and the upper front teeth. **F.v**
10. Dental: the tip of the tongue and the inner surface of the upper front teeth. ,
that ,thin
11. Alveolar: the tip and the blade of the tongue and the teeth ridge: **t.d.n.l.s.z**
12. Post-alveolar: the tip of the tongue and rear part of the teeth. The soft palate is in raised position. **r**
13. Palato-alveolar: the tongue and the teeth ridge. **Ch,j,sh, y**
14. Palatal: the tongue moves towards the hard palate: **j**
15. Velar: the tongue and the soft palate: **k.g.ing**