THEORETICAL BASIS OF ENGLISH LANGUAGE

Part 1. Theory of English Phonetics

Lecture 1. Introduction

Lecture plan:

1. Phonetics as a science
2. Divisions and branches of phonetics
3. Methods of phonetic investigation

Phonetics is concerned with the human noises by which the thought is actualized or given audible shape: the nature of these noises, their combinations, and their functions in relation to the meaning. Practical or normative phonetics studies substance, the material form of phonetic phenomena in relation to meaning. Theoretical phonetics is mainly concerned with the functioning of phonetic units in the language.

Traditionally phonetics is divided into **general** phonetics which studies the complex nature of phonetic phenomena and formulates phonetic laws and principles and **special** phonetics which is concerned with the phonetic structure of a particular language. Phonetics studies the sound system of the language, that is segmental units (phonemes, allophones), suprasegmental units (word stress, syllabic structure, rhythmic organization, intonation). Phonetics is closely connected with general linguistics but has its own subject matter (Investigation).

Thus phonetics is divided into two major components: segmental phonetics, which is concerned with individual sounds (i.e. "segments" of speech), their behaviour; and suprasegmental phonetics whose domain is the larger units of connected speech: syllables, words, phrases and texts. All speech sounds have 4 aspects (mechanisms):

- Articulatory – it is the way when the sound-producing mechanism is investigated, that is the way the speech sounds are pronounced

- Acoustic – speech sound is a physical phenomenon. It exists in the form of sound waves which are pronounced by vibrations of the vocal cords. Thus each sound is characterized by frequency, certain duration. All these items represent acoustic aspect.

- Auditory – sound perception aspect. The listener hears the sound, percepts its acoustic features and the hearing mechanism selects from the acoustic information only what is linguistically important.

- Functional – every language unit performs a certain function in actual speech. Functional aspect deals with these functions.

According to these 4 aspects of speech sounds 4 branches are distinguished, each of them has its own method of investigation:

- Articulatory phonetics - studies (investigates) sound producing mechanism. Its method consists of observing the way in which the air is set in motion, the movements of the speech organs and the coordination of these movements in the production of single sounds and trains of sounds. It borders with anatomy and physiology and the tools for investigating just what the speech organs do are tools which are used in these fields: direct observation, wherever it is possible, e.g. lip movement, some tongue movement; combined with x-ray photography or x-ray cinematography; observation through mirrors as in the laryngoscopic investigation of vocal cord movement, etc.

- Acoustic phonetics - studies the way in which the air vibrates between the speaker's mouth and the listener's ear. Its basic method is instrumental. Speech sounds are investigated by means of operator called spectrograph. Intonation is investigated by intonograph. Acoustic

phonetics comes close to studying physics and the tools used in this field enable the investigator to measure and analyze the movement of the air in the terms of acoustics. This generally means introducing a microphone into the speech chain, converting the air movement into corresponding electrical activity and analyzing the result in terms of frequency of vibration and amplitude of vibration in relation to time. The use of such technical devices as spectrograph, intonograph and other sound analyzing and sound synthesizing machines is generally combined with the method of direct observation.

- Auditory phonetics – the branch of phonetics investigating the hearing process. Its interests lie more in the sensation of hearing, which is brain activity, than in the physiological working of the ear or the nervous activity between the ear and the brain. The means by which we discriminate sounds – quality, sensations of pitch, loudness, length, are relevant here. The methods applied in auditory phonetics are those of experimental psychology: experimenting, usually based on different types of auditory tests.

- Functional phonetics – is also termed phonology. It studies the way in which sound phenomena function in a particular language, how they are utilized in that language and what part they play in manifesting the meaningful distinctions of the language. So this is the branch of phonetics that studies the linguistic function of consonant and vowel sounds, syllabic structure, word accent and ‘prosodic features, such as pitch, stress and tempo. In linguistics, function is usually understood to mean discriminatory function, that is, the role of the various elements of the language in the distinguishing of one sequence of sounds, such as a word or a sequence of words, from another of different meaning. The basic method is commutation or substitution (замены), substituting sounds in different environments.

Questions:

1. What does the phonetics deal with?
2. What is the difference between practical phonetics and theoretical one?
3. What does the phonetics study?
4. What are segmental and suprasegmental components of phonetics?
5. How can you characterize four aspects of all speech sounds?
6. What four branches of phonetics are distinguished?
7. Define articulatory phonetics and its methods of investigation.
8. Define acoustic phonetics and its methods of investigation.
9. Define auditory phonetics and its methods of investigation.
10. Define functional phonetics and its methods of investigation.