Q1. Coarticulation: It is a situation in which a conceptually isolated speech sounds overlaps or is influenced by a preceding or following speech sound.

Phonation: Phonation is the process by which the larynx, or voice box, produces sounds.

Fundamental Frequency: The frequency which causes resonance to occur at the vocal cords.

Epochs: Epoch is the instant of significant excitation of the vocal-tract system during production of speech

Formants: These are prominent bands of high frequency vibrations caused due to natural resonance of human vocal tract. They are spectral peaks of a sound wave in harmonics.

Pitch: It is the rate at which the vocal folds vibrate, leading to relative highness or lowness of tone perceived by the ear.

Q2. True. Female pitch is higher when compared to male pitch because Males tend to resort to Loudness which is a result of Amplitude of the sound wave , whereas pitch is due to the vibration of the vocal cords. Males have longer and thicker folds which facilitates their deep voice, whereas females have long , narrow vocal cord which leads to higher rate of vibration , thus higher pitch.

Moreover, due to these characteristics female have higher pitch range.

Q3. Speech Signals are created at the Vocal cords, it travels through the Vocal tract, and produced at speakers mouth, gets to the listeners ear as a pressure wave ,Non-Stationary, but can be divided to sound segments which have some common acoustic properties for a short time interval.

Speech signals have lot of variation depending upon the manner of articulation or placement of articulation ,tongue height and backness ,etc. They vary depending upon the vowel, consonants, words, sentence being used and how. Even accent plays a huge role. Unlike other signals, speech is used to convey meaning and other signals not necessarily may have meaning , unlike music.

It is one of the easiest modes of communication , besides other modes such as which can become tedious .