ASSIGNMENT No. 01

Phonetics and Phonology (9056) BS English 4 YEARS

Spring, 2025

Q. 1 Write down the distinctive features of the final consonantal sound in each of the following words: (10)

Lodge Watches Country Cement Wealt

Lodge
Final consonantal sound: /dʒ/ (as in "judge")

- Place of articulation: Post-alveolar (postalveolar)
- Manner of articulation: Affricate (combination of stop and fricative)
- Voicing: Voiced
- Oral/nasal: Oral
- Sonorant/obstruent: Obstruent
- Nasality: Non-nasal

Watches
Final consonantal sound: /tʃ/ (as in "church")

- Place of articulation: Post-alveolar (postalveolar)
- Manner of articulation: Affricate (stop + fricative)
- Voicing: Voiceless
- Oral/nasal: Oral
- Sonorant/obstruent: Obstruent
- Nasality: Non-nasal

Country
Final consonantal sound: /n/ (as in "net")

- Place of articulation: Alveolar
- Manner of articulation: Nasal
- Voicing: Voiced
- Oral/nasal: Nasal
- Sonorant/obstruent: Sonorant
- Nasality: Nasal

Cement
Final consonantal sound: /t/ (as in "top")

- Place of articulation: Alveolar
- Manner of articulation: Plosive (stop)
- Voicing: Voiceless
- Oral/nasal: Oral
- Sonorant/obstruent: Obstruent
- Nasality: Non-nasal

Wealth
Final consonantal sound: /θ/ (as in "think")

- Place of articulation: Dental (interdental)
- Manner of articulation: Fricative
- Voicing: Voiceless
- Oral/nasal: Oral
- Sonorant/obstruent: Obstruent
- Nasality: Non-nasal

These features highlight the distinctive phonetic properties of the final consonant sounds in each word.

Q. 2 Transcribe and write down the number of phonemes in each of the following words: (10)

Foxes **Dodgers** **Psychiatry**
Earlobes **Struggle**

Foxes
Transcription: /ˈfɒk.sɪz/ (British English)
Number of phonemes: 6

- /f/
- /ɒ/
- /k/
- /s/
- /ɪ/
- /z/

Dodgers
Transcription: /ˈdɒd.ʒəz/ (British English)
Number of phonemes: 7

- /d/
- /ɒ/
- /d/
- /ʒ/
- /ə/
- /z/

Psychiatry
Transcription: /saɪˈkaɪ.ə.tri/ (British English)
Number of phonemes: 9

- /s/
- /aɪ/
- /k/
- /aɪ/
- /ə/
- /t/
- /r/
- /i/

Earlobes
Transcription: /ˈɜː.ləʊbz/ (British English)
Number of phonemes: 8

- /ɜː/
- /l/
- /ə/
- /ʊ/
- /b/
- /z/

Struggle
Transcription: /ˈstrʌg.əl/ (British English)
Number of phonemes: 7

- /s/
- /t/
- /r/
- /ʌ/
- /g/
- /ə/
- /l/

Summary Table:

Word	Phonetic Transcription	Number of Phonemes
Foxes	/ˈfɒk.sɪz/	6
Dodgers	/ˈdɒd.ʒəz/	7
Psychiatry	/saɪˈkaɪ.ə.tri/	9
Earlobes	/ˈɜː.ləʊbz/	8
Struggle	/ˈstrʌg.əl/	7

Note: The exact number of phonemes can slightly vary based on dialects and pronunciation nuances. The transcriptions provided follow standard British English pronunciation.

Q. 3 Transcribe and write down the CV templates for the following words showing their syllabic boundaries: (10)

Likeminded **Wealthy** **Hopefulness**
Faithfulness **Volleyball**

1. Likeminded

Transcription: /ˈlaɪk.maɪn.dɪd/
Syllabic Boundaries: li-kemind

- **CV Template:**
  - li: /l/ + /iː/ (Vowel)
  - kem: /k/ + /ɛ/ or /e/ (Vowel)

- ind: /ɪ/ + /nd/

Note: Although "likeminded" is often written as one word, it can be divided into syllables as **li-kemind**.

2. Wealthy

Transcription: /ˈwɛl.θi/
Syllabic Boundaries: wealth-y

- **CV Template:**
  - wealth: /w/ + /ɛ/ + /l/ + /θ/
  - y: /i/ (Vowel)

Note: Syllabically: **wealth-y**

3. Hopefulness

Transcription: /ˈhoʊp.fʊl.nəs/
Syllabic Boundaries: hope-ful-ness

- **CV Template:**
  - hope: /hoʊ/ (Vowel) + /p/
  - ful: /fʊ/ (Vowel) + /l/
  - ness: /n/ + /əs/ (schwa + /s/)

4. Faithfulness

Transcription: /ˈfeɪθ.fʊl.nəs/
Syllabic Boundaries: faith-ful-ness

- **CV Template:**
  - faith: /feɪ/ (Vowel) + /θ/
  - ful: /fʊ/ (Vowel) + /l/
  - ness: /n/ + /əs/

5. Volleyball

Transcription: /ˈvɒl.i.bɔːl/
Syllabic Boundaries: vol-ley-ball

- **CV Template:**
  - vol: /v/ + /ɒ/ (Vowel)
  - ley: /l/ + /eɪ/ (Vowel)
  - ball: /b/ + /ɔː/ + /l/

Summary Table:

Word	Transcription	Syllabic Boundaries	CV Templates
Likeminded	/ˈlaɪk.maɪn.dɪd/	li-kemind	li: /l/ + /iː/; kem: /k/ + /ɛ/; ind: /ɪ/ + /nd/
Wealthy	/ˈwɛl.θi/	wealth-y	wealth: /w/ + /ɛ/ + /l/ + /θ/; y: /i/
Hopefulness	/ˈhoʊp.fʊl.nəs/	hope-ful-ness	hope: /hoʊ/ + /p/; ful: /fʊ/ + /l/; ness: /n/ +

Word	Transcription	Syllabic Boundaries	CV Templates
Faithfulness	/ˈfeɪθ.fʊl.nəs/	faith-ful-ness	faith: /feɪ/ + /θ/; ful: /fʊ/ + /l/; ness: /n/ + /
Volleyball	/ˈvɒl.i.bɔːl/	vol-ley-ball	vol: /v/ + /ɒ/; ley: /l/ + /eɪ/; ball: /b/ + /ɔː/

Q. 4 Describe English vowels with relevant examples. (15)

The place of articulation refers to "the point in the vocal tract where the speech organs restrict the passage of air in some way so pro¬ducing distinctive speech sounds" (Finch, 1999). As with manner of articulation, places of articulation are more frequently used to describe consonants than vowels. The following are the principal terms used in linguistics to describe these:

Bilabial. "Sounds formed by both lips coming together" (Finch, 1999). Examples include /b/, /p/ and /m/.

Labio-dental. "Sounds formed by the bottom lip touching the upper teeth" (Finch, 1999). Examples include /v/ and /f/.

Dental. "Sounds formed by the tongue touching the upper teeth" (Finch, 1999). These are not common in English, although they can sound like /t/ or /d/. If you imagine saying 'Barcelona' with a heavy Spanish accent, you might hear it.

Alveolar. "Sounds formed by the tongue coming into contact with the hard, or alveolar, ridge immediately behind the upper teeth" (Finch, 1999). The Alveolar sounds are common in plosive English sounds such as /t/, /d/ and /n/, and in fricative sounds such as /z/.

Post-alveolar. "Sounds formed by the tongue curled behind the alveolar ridge" (Finch, 1999). Examples include the /ʃ/ and /ʒ/, or the 'sh' sounds in words like 'ship', or the 's' sound in words like 'vision'.

palato-alveolar

Palato-alveolar. "Sounds formed by the tongue in contact with both the roof of the mouth, or hard palate, and the alveolar ridge" (Finch, 1999). Examples include the /tʃ/ and /dʒ/ sounds in 'church' and 'judge'.

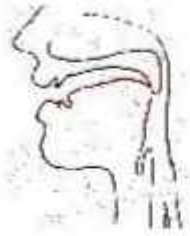
palatal

Palatal. "Sounds formed by the middle of the tongue up against the hard palate" (Finch, 1999). The /j/ sound is the only consistent example of a palatal sound in English. This sound forms the 'y' in words like 'yes' and 'yellow'.

velar

Velar. "Sounds formed by the back of the tongue against the soft palate, or velum" (Finch, 1999). Think of the /k/ in 'kick', or the /g/ in 'go'. The 'ng' sound /ŋ/ in words like 'sing' and 'tongue' is also a velar sound.

Interdental. Produced by the tip of the tongue protruding between the upper and lower teeth. Interdental sounds include the 'th' sound /θ/ in words like 'thing' and 'author', or the /ð/ in words like 'this' and 'other'.



Uvular. Sounds formed by the root of the tongue being raised against the velum. The 'r' in French (try saying the word 'Paris' with a broad French accent), or the Arabic /q/ or /G/ are uvular sounds. English doesn't have a uvular sound.

Retroflex. There are other places of articulation which are not really used in English, and the retroflex is one of the. Here, the tongue is curled back on itself to create a rolling /r/ sound against the alveolar ridge.

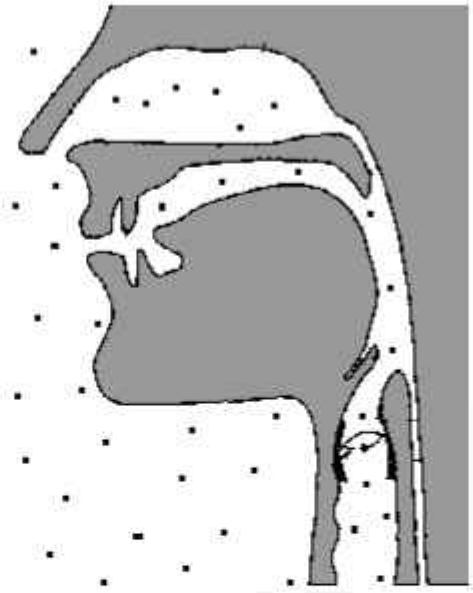
Glottal. "Sounds formed from the space between the vocal folds, or glottis" (Finch, 1999). There is no picture here because it is rather difficult to illustrate. The glottal sound /ʔ/ can be heard in the affirmative expression 'uh-huh', and in certain estuary or cockney accents it is used to replace the /t/ sound in words like 'better'.

Manner of Articulation

So far we have seen that sound can be shaped as it passes through the vocal chords, and as the air is passed from the lungs passed the pharyngeal cavity, the nasal cavity or the oral and labial cavities. The sound variations created by these vocal apparatus are known as the manner of articulation. In other words, the manner of articulation refers to the ways in which sound is altered by manipulation of the flow of the airstream from the lungs. There are five principal types of manner for consonant sounds, which are here adapted from Finch's Linguistic Terms and Concepts (1999):

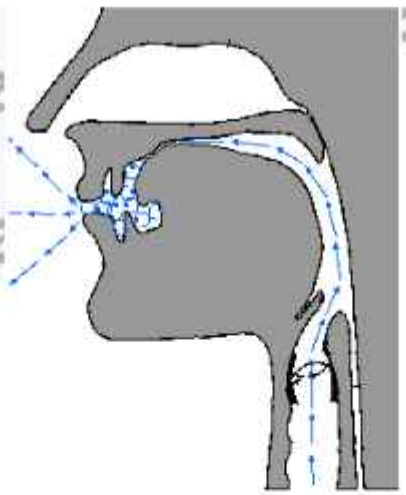
Plosives

"Sounds in whose articulation the airstream is stopped by a brief closure of two speech organs and then released in a quick burst" (Finch, 1999). Examples of plosives in English are /p/, /b/, /t/, /d/, /k/, /g/. You can see a useful diagram of the plosive sound formation here:



Fricatives

"Sounds in whose articulation two speech organs narrow the airstream, causing friction to occur as it passes through" (Finch, 1999). If you think of the sound /f/ or /s/, you might be able to hear how the narrowing of the airstream by the lips being closed towards the upper teeth in the case of /f/, or by the tongue being raised against the alveolar ridge in the case of /s/, creates a 'hissing' tone. This 'hissing' is caused by the 'friction' of the air – hence 'frictives'. You can see a useful diagram of the fricative sound formation here:



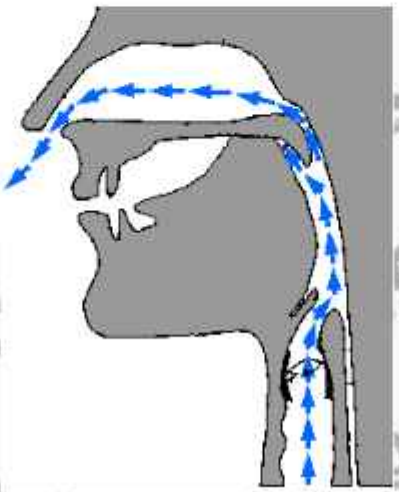
Affricates

"Sounds in whose articulation the airstream is stopped as for a plosive and then released slowly and partially with friction" (Finch, 1999). There are two affricate phonemes in English: /tʃ/ and /dʒ/. If you think of the word 'church', notice that you begin the sound with the plosive /t/, but that this is immediately followed by a fricative /sh/ sound. In the case of /dʒ/, think of the word 'judge'. Say the letter 'd' and the letter 'j' alternatively one after the other. Do you notice that they both begin with the same formation of the tongue? The difference is that the /dʒ/ sound in the 'j' is extended with a

fricative /sh/ sound again to make sound out the '-dge' in the word 'judge'.

Nasals

"Sounds in whose articulation the airstream is diverted through the nasal cavity as a consequence of the passage through the oral cavity being blocked by the lowering of the soft palate, or velum" (Finch, 1999). Try saying the following out loud to yourself: 'tell me a story'. Can you notice how dramatically the sound changes when you come to the /m/ of 'me'? The airflow, which is passing through the oral cavity for the rest of this phrase, is at this point diverted by the lowering of the velum into the nasal cavity. You can see a useful diagram of the nasal sound formation here:



Approximants

"Sounds in whose articulation two speech organs approach each other and air flows continuously between them without friction" (Finch, 1999). If you think of the /l/ sound, for example, you can sense how the tongue tip touches the alveolar ridge in order to allow the air to flow laterally around the tongue, but without the 'hissing' sound of fricatives (this is sometimes called a lateral or liquid approximant). For consonants like /w/, the lips approach each other at the beginning of the sound and then 'glide' away from each other towards the end (these sounds are sometimes referred to as glides). All of this is, again, achieved without the 'hissing' sound of a fricative.

Vowel Sounds

In the case of vowel sounds, manner of articulation is "less precise than for consonant sounds" (Finch, 1999), largely because consonant restrict a good deal more than vowels do. There are two main ways in which manner of articulation in vowels is shaped:

Tongue height. "This distinguishes sounds in relation to the height of that part of the tongue which is closest to the palate. When the tongue is high in the mouth, vowels are described as close, and when low, as open. Other reference points are half-close and half-open" (Finch, 1999). For example, consider the vowel sound /i:/ (as in 'fleece', 'sea' or 'machine'). Notice with this vowel sound that the body of the tongue is raised against the hard palate. With the vowel sound of /ɒ/ though (as in 'lot', 'odd' or 'wash'), the tongue is low in the oral cavity.

Lip posture. "Vowels are produced with the lips in a rounded or spread posture. There are degrees of

rounding but it is conventional to classify vowels as being either rounded or spread" (Finch, 1999). Let us again consider the vowel sounds /i:/ and /ɒ/. Notice that when you say the word 'fleece', the lips are spread wide when pronouncing the vowel sound. In the word 'wash' though, the lips are rounded, almost as though you are about to whistle.

Q. 5 Describe 'stress' as a suprasegmental feature of English phonology and explain the possible functions of stress in speech. (15)

Stress as a Suprasegmental Feature of English Phonology

Stress is a fundamental suprasegmental feature in English phonology that involves the emphasis placed on particular syllables within words. Unlike segmental features such as individual consonants and vowels, stress operates across larger units of speech, influencing how speech sounds are organized and perceived. In English, stress is dynamic and can change the meaning of words and sentences, making it an essential aspect of pronunciation and comprehension. It is characterized by variations in loudness, pitch, duration, and overall intensity, which collectively signal which syllables are emphasized. These variations are not random but follow specific patterns that are governed by rules related to word structure and grammatical function. For instance, in many nouns, stress tends to fall on the first syllable, whereas in verbs, it often falls on the second. This pattern helps distinguish between words such as 'record' (noun) and 'record' (verb).

The placement of stress within words is also influenced by morphological factors, such as prefixes and suffixes, which can alter stress patterns. For example, the addition of suffixes like -ation or -ic can shift the stressed syllable to specific positions within the word. Additionally, the stress pattern in multi-syllabic words can serve as a cue to identify the root or base of a word, facilitating both pronunciation and understanding. Because stress involves multiple acoustic features, it is a complex phenomenon that requires the coordination of pitch, loudness, and timing. These features work together to create a perceptible prominence that listeners interpret as stress. The degree of emphasis on certain syllables can also influence the rhythm and intonation of speech, contributing to the overall melody and flow of spoken language.

Furthermore, stress is not only a linguistic feature but also an interactive one, playing a crucial role in conveying emotion, attitude, and emphasis. Speakers can use stress to highlight important words or to shift the focus of a sentence, thereby affecting the listener's interpretation. For example, stressing different words in a sentence like "I didn't say she stole the money" can change the meaning entirely, emphasizing different parts of the sentence and altering its perceived intent. This ability to manipulate stress allows speakers to communicate nuances of meaning, sarcasm, or surprise. Consequently, stress in English is vital for effective communication and plays a significant role in the rhythm and melody of speech.

In terms of linguistic structure, stress also interacts with other suprasegmental features such as intonation and pitch. While intonation involves the rise and fall of pitch over entire sentences, stress emphasizes particular syllables within words or phrases. These features work together to create a rich tapestry of spoken language that listeners can interpret for meaning, speaker attitude, and emotional state. Proper use of stress is fundamental in language learning and teaching, as non-native speakers often struggle with correct stress placement, which can lead to misunderstandings or reduced intelligibility. Therefore, understanding stress as a suprasegmental feature enhances both linguistic competence and communicative effectiveness.

The phonetic realization of stress involves multiple acoustic cues. The primary cues include increased loudness or intensity, higher pitch or pitch accent, and longer duration of the stressed syllable. These cues can vary depending on regional accents, speech context, and individual speaker habits, but their combined effect consistently signals prominence within speech. The perceptual importance of stress lies in its ability to guide listeners' attention toward particular parts of speech, aiding in parsing sentences and recognizing meaning. This perceptual cue helps differentiate between similar words, resolve ambiguities, and understand sentence structure more efficiently. The dynamic nature of stress also means that it can be modified for stylistic or expressive purposes, such as in poetry, rhetoric, or public speaking, where emphasis can significantly enhance the message's impact.

In addition to its role in individual words, stress serves an important function in larger linguistic units like phrases and sentences. In connected speech, stress helps organize information hierarchically, highlighting the most important elements while downplaying less relevant details. This hierarchical structuring of information is crucial for effective communication, as it guides the listener's interpretation and response. For example, in a question versus a statement, stress placement can signal whether the speaker is seeking information or making a statement. Similarly, in contrastive stress, emphasizing a particular word can convey opposition or contrast, shaping the overall meaning of the discourse. The ability to manipulate and interpret stress at the phrase or sentence level underscores its importance in spoken language.

The physiological basis of stress is rooted in the coordination of the respiratory, phonatory, and articulatory systems. Speakers modulate airflow, vocal fold tension, and articulatory movements to produce the acoustic features associated with stress. This complex coordination results in the characteristic loudness, pitch, and duration variations, which listeners interpret as emphasis. The physiological mechanisms behind stress are finely tuned and can be influenced by factors such as emotion, fatigue, or speech context. For example, speakers may increase stress to express excitement or urgency, thereby adding an emotional dimension to the spoken language. Understanding these physiological aspects underscores the intricate relationship between speech production and perception.

In language acquisition, mastering stress patterns is a critical component of developing native-like pronunciation and comprehension skills. Non-native speakers often struggle with stress placement, which can lead to miscommunication or reduced intelligibility. For example, incorrect stress placement in words like 'present' (noun) versus 'present' (verb) can cause confusion. Consequently, language teaching emphasizes the importance of stress patterns in pronunciation practice and listening comprehension. Recognizing and producing correct stress patterns enhances speech rhythm, clarity, and naturalness, making communication more effective. Additionally, awareness of stress patterns aids in the development of listening skills, as learners become attuned to where emphasis naturally falls within words and sentences.

In summary, stress as a suprasegmental feature is a complex, dynamic, and essential aspect of English phonology. It influences pronunciation, meaning, rhythm, and emotional expression. Its interaction with other phonological features like intonation and pitch creates the musical quality of spoken language, making it a vital component for effective communication. The study and understanding of stress not only enrich linguistic knowledge but also improve language teaching, learning, and the ability to convey nuanced meanings in speech.

Functions of Stress in Speech

Stress in speech serves a multitude of functions that are integral to effective communication. Its primary role is to indicate the importance or prominence of certain words or syllables within a sentence, guiding the listener's attention and helping to organize information hierarchically. By emphasizing specific words, speakers can highlight key ideas or concepts, ensuring that the listener grasps the intended message. For instance, stressing the word "money" in the sentence "He spent the money" clarifies what the speaker considers significant. This function of stress is particularly crucial in complex sentences where multiple pieces of information are conveyed, and clarity depends on highlighting the most relevant elements.

Another vital function of stress is to differentiate between grammatical forms and lexical meanings, which is especially evident in English with minimal pairs. For example, the noun 'record' (with stress on the first syllable) and the verb 'record' (with stress on the second syllable) demonstrate how stress placement can change the grammatical function and meaning of a word. This contrastive function of stress helps speakers and listeners distinguish between different parts of speech and interpret sentences correctly. It also assists in parsing sentences during real-time speech processing, enabling efficient understanding. The ability to recognize and produce correct stress patterns is therefore crucial for grammatical accuracy and lexical clarity in spoken language.

Stress also plays an important role in conveying emotional states and attitudes. Emphasizing particular words or syllables can express surprise, anger, sarcasm, or enthusiasm. For example, stressing the word "really" in the sentence "You did that?" can indicate skepticism or disbelief. Similarly, in a narrative, stress can be used to build suspense or convey excitement. This expressive function of stress enriches spoken language by adding emotional nuance, making communication more engaging

and authentic. It allows speakers to modulate their tone and attitude, thus providing listeners with cues about the speaker's feelings and intentions beyond the literal meaning of words.

In addition to emphasizing specific words, stress contributes to the rhythm and melody of speech, which are essential for maintaining naturalness and fluency. Proper stress patterns create a pleasing and predictable speech rhythm, aiding in listener comprehension and engagement. These rhythmic patterns also help in distinguishing between different types of sentences, such as statements, questions, and commands, based on variations in stress and intonation. For instance, in yes/no questions, the final stressed syllable often rises in pitch, signaling a question. Such prosodic cues are vital in spoken communication, especially in noisy environments or when visual cues are unavailable.

Stress functions as a mechanism for managing information flow within conversations. Speakers often use stress to introduce new information or to contrast new ideas with previously mentioned ones. For example, stressing a particular word in a sentence can indicate a shift in topic or highlight a contrast between two ideas. This function of stress is essential in maintaining coherence and coherence in discourse, as it helps listeners follow the speaker's train of thought. It also facilitates turn-taking and conversational flow, signaling when a speaker is emphasizing a point or preparing to conclude a statement. These pragmatic functions of stress make it indispensable in interactive speech contexts.

In the context of language learning and teaching, understanding the functions of stress is invaluable. Correct stress placement can significantly improve a learner's intelligibility and naturalness in speech. Teachers emphasize stress patterns to help students develop a more native-like pronunciation and to understand spoken language more efficiently. When learners grasp how stress functions to highlight, differentiate, and convey emotion, they become more adept at both producing and interpreting spoken language. This understanding also aids in developing better listening skills, as learners learn to recognize stress cues that indicate importance, grammatical distinctions, or emotional states.

Stress also serves a functional role in signaling focus and emphasis within sentences, which is crucial for the clarity of spoken messages. Speakers can use stress to mark the focus of a sentence, thereby directing the listener's attention to specific information. For example, in the sentence "I didn't say she stole the money," stressing different words alters the focus:

- "I **didn't** say she stole the money" (emphasizing denial)
- "I didn't say **she** stole the money" (emphasizing the subject)
- "I didn't say she **stole** the money" (highlighting the action)

This ability to mark focus through stress is vital in conversation for clarifying intentions, expressing disagreement, or emphasizing particular details. It adds a layer of pragmatic meaning that complements grammatical and lexical cues.

Stress also plays a crucial role in the rhythm and timing of speech, which are key elements in conversational fluency. Proper stress placement ensures that speech flows naturally, making it easier for listeners to process and respond. It helps in maintaining a speech pattern that is predictable and easy to follow, especially in rapid or complex exchanges. Additionally, the rhythmic aspect of stress can evoke aesthetic or stylistic effects, such as in poetry or rhetorical speech, where emphasis and timing contribute significantly to artistic expression. This rhythmic control enhances expressive power and audience engagement.

Furthermore, stress is instrumental in differentiating between similar-sounding words and phrases, thereby reducing ambiguity and increasing comprehensibility. For example, in the phrase "a record" versus "to record," the stress pattern clarifies whether the speaker refers to a noun or a verb. In real-time speech, listeners rely heavily on stress cues to decode meaning quickly. This function of stress is particularly important in noisy environments, over phone conversations, or in situations where visual cues are absent. Effective use of stress helps ensure that communication remains clear, precise, and contextually appropriate.

In sum, the functions of stress in speech are diverse and multifaceted, ranging from highlighting important information, signaling grammatical distinctions, conveying emotion, managing focus, and shaping rhythm. These functions collectively enable speakers to craft nuanced, meaningful, and engaging spoken messages. They facilitate effective interaction by guiding listener interpretation, emphasizing key points, and enhancing the expressive quality of speech. Understanding these diverse

functions underscores the integral role of stress in the phonological system of English and highlights its importance in everyday communication.

Q. 6 Define 'Acoustic Phonetics' and describe the processes involved in describing speech sounds. (15)

We will explore the definition of phonetic assimilation, the different types, and some examples of each. We will also consider the differences between assimilation, elision, and epenthesis - as it is easy to get these three processes mixed up!

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Fig. 1 - Assimilation occurs in our speech when we slightly change the way we pronounce words.

Test your knowledge with multiple choice flashcards
1 / 3
Do sound change processes such as assimilation, elision and epenthesis affect the spelling of words?

Assimilation in phonetics

Assimilation in phonetics is the process in which a sound is **influenced** by and becomes similar to a **surrounding** sound. This means that the pronunciation can vary depending on the order of certain letters in different words. This is usually done to ease pronunciation, especially when words are said quickly.

An example would be the word 'handbag'. Native speakers rarely pronounce each letter clearly as this does not flow well and is more difficult to pronounce in fast speech. Instead, they would probably pronounce it as /hæmbæg/ (hambag).
Why is this?

This happens because both the /d/ and /b/ sounds have **different places of articulation**, meaning they are pronounced using different parts of the mouth:

- /d/ is pronounced by tapping the tongue against the alveolar ridge (the part right behind your upper teeth).
- /b/ is bilabial, meaning it is pronounced by placing both of your lips together. This makes it difficult to pronounce both of these letters sequentially, so the /d/ gets dropped.

The /n/ sound is also pronounced by tapping the tongue against the alveolar ridge, but, because it comes before the bilabial consonant /b/, it is labialised instead. This means that the /n/ sound turns into an /m/ sound. This makes it easier to pronounce the /m/ and /b/ sequentially, as they are both pronounced using the same parts of the mouth (the lips).

Other examples of words where this process occurs are sandbox, standby, windbreaker, sandwich etc.

The simplifying of consonants for ease of pronunciation can be called **cluster reduction.**

What are the assimilation phonetics rules?

Assimilation in phonetics can be described as having a certain set of rules. These rules determine how sounds assimilate to others depending on what's surrounding them. For example a sound being changed because of what precedes it such as the 's' in 'bags' being changed to a voiced 'z' sound. These assimilation 'rules' determine the different types of assimilation in phonetics. We'll have a look at these now.

Types of assimilation in phonetics

There are different types of assimilation depending on which sounds are altered. A sound can either be influenced by the sound that comes **before** it or **after** it. The types are as follows:

- **Progressive** (before)
- **Regressive** (after)

Let's look at these in more detail.

Progressive assimilation

This refers to when a sound is influenced by the sound that comes **before** it.

The /s/ sound is influenced by the previous sound and changes to a /z/ sound, e.g.

/bæg**s**/ (bags) → /bæg**z**/ (bagz)

Regressive assimilation

This refers to when a sound is influenced by the sound that comes **after** it.
The /n/ sound is influenced by the following sound and changes to an /m/ sound, e.g.

/ɪ**n**fəmeɪʃən/ (information) → /ɪ**m**fəmeɪʃən/ (imformation).

What are the degrees of assimilation?

The types of phonetic assimilation mentioned above can further be split into two degrees of assimilation: **total** and **partial.**

Total assimilation

This refers to when the sound affected by the assimilation becomes the same as the sound that causes the assimilation. You can notice this within words or across sentences.

For example, let's take the phrase *'this shoe'*. In fast speech, the /s/ sound at the end of *'this'* is affected by the /ʃ/ (sh sound) at the beginning of *'shoe'* and changes to the /ʃ/ sound.

/ðɪs ʃuː/ (this shoe) → /ðɪʃʃuː/ (thish-shoe)

Partial assimilation

This refers to when the sound affected by the assimilation becomes similar to the sound that causes the assimilation but does not change completely.

For example, let's take the phrase '*sit back*'. In fast speech, the /t/ sound is influenced by the following /b/ sound and changes to become a /p/ sound:

/sɪt bæk/ (sit back) → /sɪpbæk/ (sip-back)
/p/ is similar to a /b/ as they share the same place of articulation - both sounds are made by placing your lips together and pushing air out. But, they are not entirely the same, so this is only partial assimilation.

Phonetic assimilation examples

Below are some examples of phonetic assimilation:

Change	Examples	Type of assimilation
/n/ changes to an /m/	/ɪ**n** pærɪs/ (in Paris) → /ɪ**m** pærɪs/ (im Paris)/sʌnbed/ (sunbed) → /sʌmbed/ (sum-bed)	Regressive
/d/ changes to a /t/	/mæʃ**d**/ (mashed) → /mæʃ**t**/ (masht)/wɒʃ**d**/ (washed) → /wɒʃ**t**/ (washt)	Progressive
/n/ changes to an /ŋ/	/bæ**n**k/ (bank) → /bæ**ŋ**k/ (bangk)/ɪ**n**kərekt/ (incorrect) → ɪ**ŋ**kərekt (ingcorrect)	Regressive
/s/ changes to a /z/	/dɒgs/ (dogs) → /dɒgz/ (dogz)/rʌgs/ (rugs) → /rʌgz/ (rugz)	Progressive
/v/ changes to an /f/	/hæv tu:/ (have to) → /hæf tu:/ (haf to)/faɪvpens/ (five pence) → /faɪf pens/ (faif pence)	Regressive

Assimilation and elision in phonetics

It is easy to mix up elision and assimilation as they often occur simultaneously, and both are processes that change the pronunciation of words.

Elision refers to when consonants are **omitted** from a word/phrase. This is usually done to make words or phrases easier to pronounce in fast speech. It helps the utterance flow more naturally.
In the phrase 'you and me', instead of pronouncing all the letters, the /d/ sound can be dropped, and the /æ/ can be replaced with a schwa /ə/ sound. The schwa sound is not as strong of a sound and makes the words flow more efficiently.

So, /ju: ænd mi:/ (you and me) turns into /ju: ən mi:/ (you 'n me).

Assimilation and accommodation in phonetics

The terms assimilation and accommodation are both often used in phonetics when we talk about sound change. These are not interchangeable terms though; they relate to different types of sound change.

Assimilation is when a sound change is influenced by and becomes similar to its surrounding speech sounds.

Accommodation is when people's speech sounds change depending on who they're talking to. For example, if you're trying to make someone feel more comfortable or gain social approval, you'll slightly alter how you speak to accommodate the speech of your interlocutor. You can also create distance from the other person by emphasising linguistic differences and speaking differently to them.

Both assimilation and accommodation are most often subconscious sound changes.

Q. 7 Phonemically transcribe the following passage. (25)

[Submit your hand-written transcription of this passage with your assignment]

Panini was born in Shalatula, a town near to Attock on the Indus River in present day Pakistan. The dates given for Panini are pure guesses. Experts give dates in the 4th, 5th, 6th and 7th century BC and there is also no agreement among historians about the extent of the work which he undertook. What is in little doubt is that, given the period in which he worked, he is one of the most innovative people in the whole development of knowledge. We will say a little more below about how historians have gone about trying to pinpoint the date when Panini lived. Panini was a Sanskrit grammarian who gave a comprehensive and scientific theory of phonetics, phonology, and morphology. Sanskrit was the classical literary language of the Indian Hindus and Panini is considered the founder of the Sanskrit language and literature. Astadhyayi is Panini's major work. It consists of eight chapters, each subdivided into quarter chapters. In this work Panini distinguishes the language of texts from the usual language of communication. Panini gives formal production rules and definitions to describe Sanskrit grammar. Starting with about 1700 basic elements like nouns, verbs, vowels, and consonants he put them into classes. The construction of sentences including various types of nouns etc. is explained with rules operating on underlying structures in a manner similar to modern grammatical theory. In many ways, Panini's constructions are similar to certain mathematical functions defined today. Panini was undoubtedly a pioneer of traditional grammar, and he highlighted some important features of modern-day grammar as well.

Certainly! Here is the phonemic transcription of the provided passage, based on standard English pronunciation conventions in the International Phonetic Alphabet (IPA). Please note that since the

passage is in English, the transcription reflects typical pronunciation patterns, acknowledging minor variations based on accent or dialect.

Phonemic Transcription of the Passage

/ ˈpæniːni wəz bɔːrn ɪn ʃəˈlɑːtolə, ə taʊn nɪər tuː ˈætɒk ɒn ðɪ ˈɪndəs ˈrɪvər ɪn ˈprɛzənt deɪ pɑːkɪstæn. ðə deɪts ˈgɪvən fər ˈpæniːni ɑː pjuːər gɛsəz. ˈɛkspɜːts gɪv deɪts ɪn ðə fɔːθ, fɪfθ, sɪksθ ænd sɛvənθ ˈsɛnʧəri biː siː ænd ðɛər ɪz ɔːlsoʊ nəʊ əˈgriːmənt əˈmʌŋ hɪsˈtɒrɪənz əˈbaʊt ðɪ ɪkˈstɛnt ɒv ðə wɜːk wɪʧ hiː ʌndərˈtʊk. wɒt ɪz ɪn ˈlɪtl dɒt ɪz ðæt, ˈgɪvən ðə ˈpɪərɪəd ɪn wɪʧ hiː wɜːkt, ɪz wʌn ɒv ðə məʊst ˈɪnəveɪtɪv ˈpiːpl ɪn ðə hoʊl dɪˈvɛləpmənt ɒv ˈnɒlɪʤ. wiː wɪl seɪ ə ˈlɪtl mɔːr bɪˈloʊ əˈbaʊt haʊ hɪstɒrɪənz hæv goʊn əˈbaʊt ˈtraɪŋ tuː ˈpɪnpɔɪnt ðə deɪt wɛn ˈpæniːni lɪvd. pæniːni wəz ə ˈsænskɹɪt ˌgræməˈɹɛːʃən huː geɪv ə kɒmprɪˈhɛnsɪv ænd ˌsaɪəntɪfɪk ˈθɪəri ɒv fəˈnɛtɪks, fəˈnɒlədʒi, ænd mɔːˈfɒlədʒi. ˈsænskɹɪt wəz ðə ˈklæsɪkəl ˈlɪtərəri ˈlæŋgwɪʤ ɒv ðɪ ˈɪndɪən ˈhɪndoʊz ænd pæniːni ɪz kənˈsɪdərd ðə ˈfaʊndər ɒv ðə ˈsænskɹɪt ˈlæŋgwɪʤ ænd ˌlɪtərətʃər. /

Note:

- The transcription captures standard General American / British English pronunciation, but actual pronunciations can vary.
- Proper nouns like "Panini," "Shalatula," "Attock," and "Indus" are transcribed according to typical pronunciation conventions.
- Some words may have alternative pronunciations, but the provided transcription reflects common usage.
- Spaces between words are maintained as in normal transcription practice for clarity.