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## Study Guide ANSWER KEY Sight and Sounds of Greek Words (Module B) Phonology (Part 2)

**Exercise One: Short Answer.** Briefly answer the following questions.

1. What are the two major phonetic classifications of consonants?

Stops and Continuants

2. What are the nine “stop” consonants?

*gamma* (Γ γ), *delta* (Δ δ), *bēta* (Β β), *kappa* (Κ κ), *tau* (Τ τ), *pī* (Π π),  
*chī* (Χ χ), *thēta* (Θ θ), and *phī* (Φ φ)

3. What constitutes a “stop” consonant?

A stop consonant is formed by the slowing down or abruptly stopping the flow of air through the mouth before being released with an expulsion of breath and sound.

4. Classify the following stop consonants according their class and order.

- |                            |                           |
|----------------------------|---------------------------|
| a. Κ κ - palatal, unvoiced | f. Π π - labial, unvoiced |
| b. Γ γ - palatal, voiced   | g. Θ θ - dental, aspirate |
| c. Τ τ - dental, unvoiced  | h. Φ φ - labial, aspirate |
| d. Χ χ - palatal, aspirate | i. Δ δ - dental, voiced   |
| e. Β β - labial, voiced    |                           |

5. What determines whether a consonant is “voiced” or “unvoiced”?

The vocal cords vibrate when saying a voiced consonant; vocal cords do not vibrate when saying an unvoiced consonant.

6. What constitutes a “palatal stop”? How many are there?

A consonant formed in back of the throat by the closure of the tongue with the soft palate in the oral cavity.

7. What constitutes a “dental stop”? How many are there?

A dental stop is formed with the tip of the tongue behind the upper teeth or placed against the alveolar ridge. There are three dental stops ( $\Delta$   $\delta$ ,  $\text{T}$   $\tau$ , and  $\Theta$   $\theta$ ).

8. What constitutes a “labial stop”? How many are there?

A labial stop is formed by closing or nearly closing during the rounding of the lips. There are three labial stops ( $\text{B}$   $\beta$ ,  $\text{P}$   $\pi$ , and  $\Phi$   $\phi$ ).

9.  $\Gamma$   $\gamma$  is coordinate with what other voiced stops?

*delta* ( $\Delta$   $\delta$ ) and *bēta* ( $\text{B}$   $\beta$ )

10.  $\text{K}$   $\kappa$  is coordinate with what other unvoiced stops?

*tau* ( $\text{T}$   $\tau$ ) and *phī* ( $\text{P}$   $\pi$ )

11.  $\chi$   $\chi$  is coordinate with what other aspirated stops?

*thēta* ( $\Theta$   $\theta$ ) and *phī* ( $\Phi$   $\phi$ )

12.  $\chi$   $\chi$  is cognate with what other palatal stops?

*kappa* ( $\text{K}$   $\kappa$ ) and *gamma* ( $\Gamma$   $\gamma$ )

13.  $\Theta$   $\theta$  is cognate with what other dental stops?

*delta* ( $\Delta$   $\delta$ ) and *tau* ( $\text{T}$   $\tau$ )

14. Φ φ is cognate with what other labial stops?

*bēta* (Β β) and *pī* (Π π)

15. Fill in the following chart with the appropriate consonants. This chart is commonly called the “Square of Stops”.

	Palatal	Dental	Labial
Voiced	Γ γ	Δ δ	Β β
Unvoiced	Κ κ	Τ τ	Π π
Aspirate	Χ χ	Θ θ	Φ φ

16. What does “aspiration” indicate in connection with pronouncing an aspirated consonant? To which English sound does it correspond?

Aspiration denotes the consonant’s pronunciation is accompanied with a strong emission of breath. It corresponds to the English “h” sound.

17. What makes a consonant a continuant consonant?

The passage of air is restricted (but not stopped), causing friction while the sound continues.

18. What are the five-continuant subcategories consonants?

sibilant, compound, nasal and liquid and the semi-consonants

19. What consonant is the only pure sibilant in Greek? Why?

*Sigma* is the only pure sibilant. The compound consonants (Ζ ζ, Ξ ξ, and Ψ ψ) have an additional sound which does not make a “hissing” sound.

20. What are the three compound consonants?

Ζ ζ Ξ ξ Ψ ψ

21. Before the three palatal stops (γ, κ, χ) and ξ, the *gamma* undergoes a phonemic change. How are these combinations pronounced?

- a. γγ - ng "thing", "king" or "finger"
- b. γκ - nch "anchor"
- c. γχ - like γχ but with more breath (the χ is an aspirated stop)
- d. γξ - nks "inks", "oinks" or the "nx" as in "lynx"

22. Fill in the following chart with the appropriate consonants.

<b>S T O P S</b>	Classes are the three positions of breath closure.		<b>Classes</b>			The nine "stops" are divided into three "classes" and three "orders".
			<b>Palatal</b>	<b>Dental</b>	<b>Labial</b>	
	<b>O r d e r s</b>	(voiced)	Γ γ	Δ δ	Β β	The orders express both the degree of the vibration in the vocal cords and force in the expiratory breath. Sound is formed by slowing down or briefly stopping the flow of air through the mouth.
		(unvoiced)	Κ κ	Τ τ	Π π	
(aspirate)		Χ χ	Θ θ	Φ φ		

<b>C O N T I N U A N T S</b>	<b>Sibilant</b> (voiced)		Σ σ		A sibilant is a hissing sound when the breath in the mouth is narrowed. Voiced Σ σ has the ζ sound as the "s" in "is"; if unvoiced, Σ σ is the "s" sound as in "sit".
	(unvoiced)		Σ σ		
	<b>Compound</b> (voiced)		Ζ ζ		Compounds are a combination of a guttural, dental or labial + σ. Like <i>sigma</i> above, notice that Ζ ζ is both voiced and unvoiced. When voiced, Ζ ζ is pronounced as "dz".
	(unvoiced)	Ξ ξ	Ζ ζ	Ψ ψ	
	<b>Nasal</b> (voiced)	Γ γ	Ν ν	Μ μ	The sound of nasal continuants is forced up toward the nasal cavity
	<b>Liquid</b> (voiced)	Λ λ Ρ ρ			The liquids fall between the classes and the air passage is mostly open.
<b>Semi-consonants</b> (voiced)	Ι ι	Ρ ρ	Υ υ	These letters serve at times as a vowel or a consonant.	

23. What are the three nasal consonants? Why are they called “nasal”?

The three nasal consonants are *gamma-nasal*, *nu-nasal* and *mu-nasal*. Their sound is forced up into the nasal cavity and released through the nose.

**Exercise Two: True or False Questions.** Choose whether the statement is true or false.

1. All consonants may be classified as either a stop or continuant consonant. There are NO exceptions. False
2. The stop consonants are subdivided according to the nature of their sound and vocal organs used in producing them. True
3. *Gamma* may be classified as either a voiced palatal stop, or as a voiced nasal continuant. True
4. The two liquid voiced continuants are *lambda* and *rho*. True
5. The three aspirate stop consonants are *phi*, *chi*, and *xi*. False
6. The three palatal stop consonants are *gamma*, *kappa*, and *chi*. True
7. The three labial stop consonants are *beta*, *pi*, and *theta*. False
8. The three nasal voiced continuant consonants are *gamma*, *mu* and *nu*. True
9. A cognate consonant is associated with a particular order. False
10. A coordinate consonant is associated with a particular order. True
11. The three orders are voiced, unvoiced, and aspirate. True
12. The three classes are palatal, dental, and aspirate. False
13. *Gamma* belongs to the same voiced order and is coordinate with the stop consonants *delta* and *beta*. True

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14. *Kappa* belongs to the same unvoiced order and is coordinate with the stop consonants *tau* and *pi*. True
  15. *Chi* belongs to the same aspirated order and is coordinate with *theta* and *phi*. True
  16. A stop consonant pronounced with the aid of the vocal cords is called “unvoiced”. False
  17. A stop consonant pronounced with a strong emission of breath is called “aspirate”. True
  18. The palatal consonant stops belong to the same class because they are formed in back of the throat by the closure of the tongue near or touching the hard palate in the oral cavity. True
  19. *Gamma* may be either a voiced consonant stop, or a nasal continuant. True
  20. Because Greek consonants undergo phonemic changes, some consonants are not pronounced (“silent consonants”). False

**Exercise Three: Multiple Choice.** Choose the best answer.

1. Which consonant has a final form (*i.e.*, when it ends a word)?
  - a. *kappa*
  - b. *phi*
  - c. **sigma**
  - d. *gamma*
2. Which of the following belong to the stop consonants?
  - a. Γ γ Θ θ Ρ ρ
  - b. **Π π Γ γ Τ τ**
  - c. Φ φ Κ κ Λ λ
  - d. Α α Δ δ Β β
3. With what sound is aspiration associated?
  - a. **a strong emission of breath**
  - b. the lips
  - c. the palate
  - d. the teeth

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4. Which of the following are the three orders?
- a. **voiced, unvoiced, and aspirate**
  - b. nasal, sibilant, compound
  - c. palatal, dental, and labial
  - d. aspirate, sibilant, and voiced
5. *Kappa* belongs to the same unvoiced order and is coordinate with which consonants?
- a. Τ τ Θ θ
  - b. Θ θ Φ φ
  - c. Δ δ Τ τ
  - d. **Π π Τ τ**
6. *Thēta* belongs to the same aspirated order and is coordinate with which consonants?
- a. **Χ χ Φ φ**
  - b. Τ τ Π π
  - c. Δ δ Β β
  - d. Φ φ Τ τ
7. *Bēta* belongs to the same voiced order and is coordinate with which consonants?
- a. Κ κ Π π
  - b. **Γ γ Δ δ**
  - c. Θ θ Γ γ
  - d. Χ χ Φ φ
8. Compound consonants belong to which consonant classification?
- a. liquid
  - b. **continuants**
  - c. nasal
  - d. stops
9. What are the three semi-consonant continuant consonants?
- a. **Ι ι Ρ ρ Υ υ**
  - b. Χ χ Θ θ Φ φ
  - c. Γ γ Ν ν Μ μ
  - d. Ξ ξ Ζ ζ Ψ ψ

10. What sounds are the independent and indispensable sounds in speech?

- a. nasal
- b. vowels
- c. consonants
- d. breathing marks

11. Which example is an illustration of an *iōta* adscript?

- a. αι
- b. ω
- c. αδης = ΑΙΔΗΣ
- d. τιμα = ΤΙΜΑ

12. Which of the following are diphthongs?

- a. ιε εε αε οο
- b. οι υι ιε οε
- c. αι ει ευ ηυ
- d. οο εε ει ευ

13. Which word has a dieresis?

- a. τιμα
- b. ΤΩΙ
- c. Μωύσης
- d. none of these

**Exercise Four: Transposition of letters.** Transpose the following Greek capital letters into their corresponding small letters, and the small letters into their corresponding capital letters.

- 1. ΠΟΙΗΣΟΥΣΙΝ ποιησουσιν
- 2. αδαμ ΑΔΑΜ
- 3. εσμεν ΕΣΜΕΝ
- 4. ΠΛΕΙΟΝΕΣ πλειονες
- 5. ΜΑΤΑΙΑ ματαια
- 6. ΑΝΘΡΩΠΩΝ ανθρωπων
- 7. επειτα ΕΠΕΙΤΑ
- 8. ΚΑΙ και
- 9. ΑΔΕΛΦΟΙ αδελφοι
- 10. κυριου ΚΥΡΙΟΥ
- 11. προφητης ΠΡΟΦΗΤΗΣ
- 12. ΚΩΛΥΕΤΕ κωλυετε