

(This is to be done individually) Name \_\_\_\_\_

# Electroencephalography (EEG)

**1. What type of researcher would most likely do these types of experiments? (Ch 1, p 15)**  
 a. Computational neuroscientist, b. Cognitive neuroscientist, c. Psychophysicist,  
 d. Neurochemist, e. Developmental neurobiologist

**2. In which lobe of the brain are the word/nonword sounds initially processed? (Ch 20, p 702-fig 20.7)**

a. frontal, b. temporal, c. parietal, d. occipital

**3. Match the item from the list below to the role it played in the study.**

a. electrodes, b. Powerlab, c. LabChart, d. headphones, e. pillow, f. eye mask

\_\_\_ Convert electrical brain activation into digital signal for storage in a computer

\_\_\_ Stabilize the head to reduce physical artifacts

\_\_\_ Minimize extraneous input to reduce mental artifacts

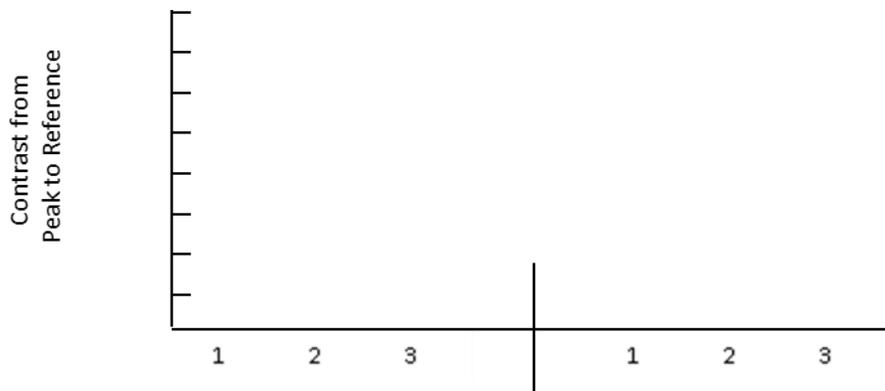
\_\_\_ Physically transmit brain activation for recording

\_\_\_ Record brain activation over time and align in time with the stimulus being presented

\_\_\_ Administer the stimulus

## Effects of Relaxation on EEG

In the space below, draw a bar graph showing the contrast magnitude of the alpha waves (8-13 Hz range) when the volunteer listened to nonsense words and real words. Do this for each of the 3 sets of words. Label the values for the y-axis. Label the levels of the independent variable below the x axis.



Independent Variable

**Conclusions and critical thinking**

Answer the following questions in complete sentences.

- 1. What are alpha waves thought to indicate? Under what condition did you see alpha waves more clearly? Did you clearly demonstrate more alpha activity in the expected condition?

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- 2. What would be your prediction about listening to real words and nonsense words in a different language that you are not fluent in? Why do you think this is? Answer the question in regard to the amount of alpha waves expected in the different conditions and relate it to language processing.

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