LabChart® ERP Questions Name _____

These questions are to be completed **INDIVIDUALLY** outside of lab**.**

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. **Distinguish between EEG and ERP regarding their temporal duration in the labs (circle both of the correct answers).**

    a. The ERP signal was calculated across a long time per trial (10's of sec) and required a large amount of data to be collected per condition (10's of trials).

    b. The EEG signal was calculated across a long time per trial (10's of sec) and required a large amount of data to be collected per condition (10's of trials).

    c. The ERP signal was calculated across a short time per trial (~ 1 sec) and required a large amount of data to be collected per condition (10's of trials).

    d. The EEG signal was calculated across a short time per trial (~ 1 sec) and required a large amount of data to be collected per condition (10's of trials).

    e. The ERP signal was calculated across a short time per trial (~ 1 sec) and required a small amount of data to be collected per condition (1-3 trials).

    f. The EEG signal was calculated across a short time per trial (~ 1 sec) and required a small amount of data to be collected per condition (1-3 trials).

3. **The electrical activity of the visual pathway in response to a stimulus is typically very small in comparison to ongoing EEG activity. What about the methods allows averages to be taken for a given condition? (choose the best answer)**

    a. There are many repetitions of each of the stimulus conditions marked by a particular type of comment line.

    b. House trials are included at which time participants are supposed to blink in order to reduce blinking on other trials.

    c. There were 5 electrodes used instead of the 3 in previous labs.

    d. The timing of each stimulus varied slightly between trials to keep the spacing from being uniform.

4. **What was done to try to minimize the number of trials with artifacts in the stimulus conditions of interest? Did that seem to be effective (why or why not)? Refer to a particular part of your data notesheet to answer this question.**
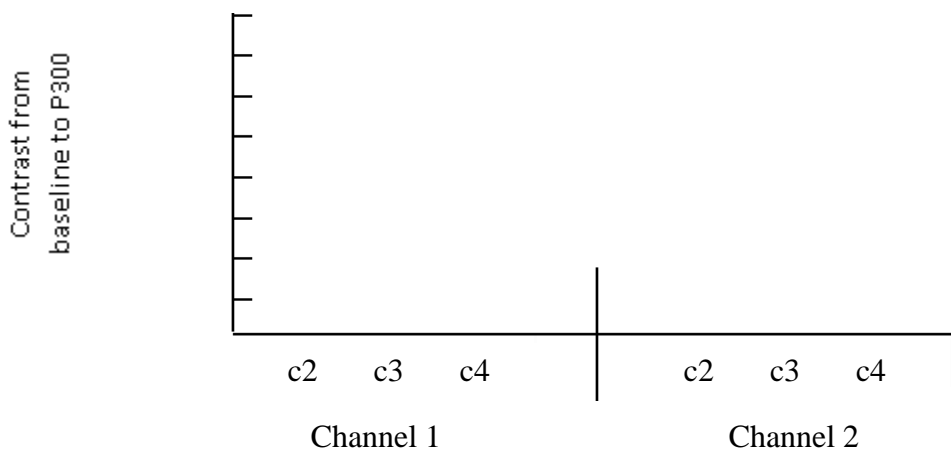

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Graph of the P300 contrast across conditions

In the space below, <u>draw a bar graph</u> showing the contrast magnitude of the ERPs for the different conditions. Do this for Channel 1 on the left and Channel 2 on the right. <u>Label the values for the y-axis</u>.

5.   **A P300 emotional response was expected in Channel 2 but not in Channel 1 (as stated in the lab protocol introduction). This would likely show up in one of 2 ways. One is that there is a straight effect of valence with positive stimuli being above neutral and neutral being above negative. The other is that there is an effect of emotionality such that the sign of the valence doesn't matter but rather the amount of difference from neutral such that positive and negative are both above neutral but not necessarily different from one another.**

   Describe what you found in the chart above in relation to the possible findings in the description above. This will include whether or not you found what was predicted. If you do not find what was significant, comment on why your results may not match.