

## **2013 AP® PSYCHOLOGY FREE-RESPONSE QUESTIONS**

2. A researcher compared the effectiveness of massed versus distributed practice in preparing for a memory test. Each of two groups memorized the definitions of 40 vocabulary words.

In group A, there were 30 participants who were all under twenty-five years of age. Participants in group A used the method of distributed practice, studying for 30 minutes on each of four evenings. They were tested on the fifth morning at 7:00 A.M. In group B, there were 30 participants who were all over sixty years of age. Participants in group B used the method of massed practice, studying only from 6:30 P.M. to 8:30 P.M. on the evening before the test. They were tested the next morning at 7:00 A.M.

All participants completed a recall test. The test measured how quickly participants recalled the definitions. The results showed that the mean difference between the distributed practice group and the massed practice group was statistically significant. The researcher provided a list of the names and test scores for each individual participant in a letter to all participants.

### **Part A**

- What is the operational definition of the dependent variable?
- Explain how the ethical flaw in the study can be corrected.
- Explain how the research design flaw in the study can be corrected.
- In a well-designed study, what does it mean to say there is a statistically significant difference between groups?

### **Part B**

How might each of the following concepts affect the results of the study?

- Fluid intelligence
- Circadian rhythm

**STOP**

**END OF EXAM**