**Unit 2 Study Guide**

*Vocab:*

* Hindsight bias
* Theory
* Hypothesis
* Operational definition
* Replication
* Case study
* Naturalistic observation
* Survey
* Sampling Bias
* Population
* Random sample
* Correlation
* Correlation coefficient
* variable
* Scatterplot
* Illusory correlation
* Regression toward the mean
* Experiment
* Experimental group
* Control group
* Random assignment
* Double-blind procedure
* Placebo effect
* Independent variable
* Confounding variable
* Dependent variable
* Validity
* Informed consent
* Debriefing
* Descriptive statistics
* Histogram
* Mode
* Mean
* Median
* Skewed distribution
* Range
* Standard deviation
* Normal curve
* Inferential statistics
* Statistical significance

***WRITE THE ANSWERS TO THE FOLLOWING QUESTIONS ON NOTEBOOK PAPER IN YOUR NOTEBOOK:***

**MODULE 4**

1. What does David Myers say are the three “roadblocks” to critical thinking?
2. In our society, we often use the phrase “*hindsight is 20-20”*. What is the psychological term used to describe this phenomenon? What else is this term commonly referred to?
3. What is Myers’ explanation about common sense, what it describes?
4. What were the findings of Ohio State psychologist Philip Tetlock (in terms of percentages) from his study of 27,000 expert predictions?
5. Why is it suggested that we naturally feel the need to perceive order in random events?

**MODULE 5**

1. What are the three main components of the scientific attitude?
2. How are *theories* different from *hypotheses*?
3. Why are operational definitions necessary?
4. What three criteria make a theory useful?
5. According to the text, what is the “starting point” of any science?
6. What three methods do psychologists use to draw conclusions?
7. What is a case study and why is it useful as a psychological practice?
8. In what ways can case studies be misleading or fall short?
9. How can Google, Facebook and Twitter be used as part of naturalistic observation?
10. How is the data from these social sites being used? (see Golder & Macy, 2001)
11. How is naturalistic observation more similar to case studies than experiments?
12. What are the three examples used as findings from naturalistic observations in the text?
13. Why do researchers do surveys?
14. What impact can the wording of surveys have on the results?
15. How can random sampling be problematic to those reading survey results (think about the *sample* for Amazon, restaurant, or movie ratings)?
16. How does Myers suggest we can achieve a representative sample?

**MODULE 6**

1. What is the correlation coefficient? What is it used for?
2. What is the purpose of using correlational studies?
3. What do the dots on a scatterplot represent?
4. What is problematic about the relationships between a correlation and causation?
5. Why is it important to distinguish that just because two factors are *correlated* it doesn’t mean that one *caused* the other?
6. Explain the possible interpretations Myers uses on page 52 to explain the correlation between low self-esteem and depression, along with a third factor.
7. Answer the “You try it!” prompt on the bottom of page 52: give three possible ways we could interpret the finding.
8. What is an example of an illusory correlation?
9. What is a possible explanation for *regression toward the mean*?
10. Explain the breast-feeding statistics Myers lists on page 54 in the context of a correlation or causation.
11. How do experiments allow researchers to focus on the possible causes and effects of a phenomenon?
12. What is the difference between the experimental group and the control group?
13. Why is it necessary to randomly assign participants to either the control group or experiment group?
14. Why is using a double-blind procedure in experiments necessary?
15. What can be concluded about Victor Benassi’s experiment with giving psychology students *quizzes* versus *self-testing items*?
16. What is the difference between the independent variable and the dependent variable?
17. What are confounding variables?
18. What is the key goal of experimental design?

**MODULE 7**

1. On your paper for #40, copy the Table 7.1 chart “Comparing Research Methods”
2. Why do you think animals are used for psychological research?
3. In your own opinion, do you feel it is necessary to test animals rather than people in certain situations? Why or why not?
4. What are the ethical measures put into place to protect animals that are test subjects?
5. What two APA ethical guidelines are in place to protect humans in psychological testing?

**MODULE 8**

1. What two examples of “off-the-top-of-the-head” estimates (numbers) are listed in the text that get echoed until they become public misinformation?
2. What is the secret to manipulating a bar graph to make the bars (results) look larger or smaller on the graph?
3. How will noting the range, mode and mean help to combat misleading statistics?
4. What is a skewed distribution?
5. What would be different about the mean, median, and mode in a normal bell curve?
6. What does it mean to say that a difference is *statistically significant*?