**Module 1 Review**

**You are not required to respond to the following list of statements and questions. However, the list may help you to summarize Module 1 and, thus, prepare for Exam 1. Moreover, being able to address these statements/questions will help to further your understanding of the key concepts covered in this class.**

(1) Describe the null hypothesis significance testing framework.

(2) Describe the null hypothesis

(3) Describe the alternative hypothesis

(4) What is a *p*-value?

(5) What is the cut-off used to determine whether or not a *p*-value is statistically significant?

(6) *P*-values range from to .

(7) What is a statistically significant *p*-value?

(8) What is a statistically non-significant *p*-value?

(9) When a *p*-value is statistically significant, explain the formal decision made regarding the null hypothesis in the NHST framework.

(10) When a *p*-value is statistically non-significant, explain the formal decision made regarding the null hypothesis in the NHST framework.

(11) What does *R*2 represent?

(12) *R*2 ranges from to .

(13) What is systematic variance versus unsystematic variance (in terms of *R*2)?

(14) What is the difference between a one-tailed and two-tailed test?

(15) What is the difference between Type I error and Type II error? (Use the terms “false positive” and “false negative” to distinguish between the two types of error.)

(16) What should researchers/HR analysts do to avoid Type I and II error? Explain.

(17) Statistical power ranges from to

(18) Ideally, statistical power should exceed .

(19) Explain the difference(s) between experimental, observational, and quasi-experimental research designs.

(20) What is the difference between a cross-sectional approach and a longitudinal approach? Is one better than the other? Why?

(21) How can nominal variables be summarized? Can they be statistically analyzed? How?

(22) Ordinal variables ranks individuals according to an attribute being measured *and* illustrates how much of the attribute each individual has. True or false. Explain

(23) The size of the unit of measurement for interval variables is typically constant and additive, but the scale does not allow multiplicative interpretations. What does this mean?

(24) Explain the difference between concurrent criterion validity and predictive criterion validity.

(25) Explain the difference between convergent validity and discriminant validity.

(26) What is the difference between measurement error and sampling error?

(27) What is common method bias and how can it be avoided?