CAUTIONS ABOUT THE PRACTICE EXAM

DEAR STUDENT: This practice tests consists of questions from past exams. By taking this practice test, you should gain an idea of whether you understand the course material as well as you think you do. Research studies have found that many students overestimate how well they know the material in their courses.

Before you take the practice test, please carefully read the CAUTIONS below.

CAUTION #1: These questions are only a SAMPLE of the many questions that could have been asked. Please don’t come away from this test thinking that the content in the items below is the only content you need to study.

CAUTION #2: Trying to “Memorize” Answers to Practice Test Questions: A Dangerous Approach. Some students try to memorize the answers to the practice test questions, rather than use the questions as a way to measure whether they understand the underlying concepts. This can be a big mistake for two reasons. First, when you see a question on an actual exam, sometimes it may look similar to a practice test question, but if so much as a single key word is different, then it becomes a different question entirely and has a different answer. Sometimes students come to my office and say “Why did I get this question wrong? I put down answer C and on the practice test C was the correct answer.” And then I show them how they didn’t read the actual test question carefully enough, and that the actual test asked about Concept X whereas the practice test asked about Concept Y, even though the wording of the rest of the question was the same. On the actual test, read every question carefully and treat it as a “fresh” question.

CAUTION #3: Some students do not look at this exam until a day or two before the real exam, by which time they have done all the readings and have studied for the real test. Then they use this practice exam and the answer key as a way to measure how well they understand the material.

Other students are curious to see what types of questions are on the test, so they look at this practice test right away or before they’ve finished studying. Curiosity is understandable. But realize that if you look at this exam before studying, and then take the exam as a practice test after studying, your score may be inflated because you “knew” what questions were on this test in advance. Of course, if you look at the exam AND the answer key out of curiosity now, then the exam becomes worthless as a practice test later! So don’t look at the answer key out of mere curiosity!

KEEP SCORE: Score how many questions you answer correctly. Don’t rely on a subjective impression (e.g., “I got most of them right” could mean you got 70% correct, which is less than a grade of C). To convert your practice test score to a grade, do the following.
1. Multiply the number of points you achieve on the practice test by 5. This converts the 40-point exam to a 200 point scale.
2. Look up the grade point on the grading scale (page 4 of syllabus). This tells you what the equivalent grade point of your practice exam would be.

EXAMPLE: George gets 34 points on the practice test.
34 x 5 = 170. So, if the exams were graded using grade points, then a score of 34 points on an exam is equivalent to a 3.1 grade point.

REMEMBER: The ten “Data Interpretation Questions” (2 x 2 Tables, Line Graphs, and Bar Graphs) are worth 2 points each.
Sample Exam 3:

Directions: This exam has 30 questions, numbered from 101 to 130. THEREFORE, ON YOUR MARK SENSE FORM, BEGIN WITH NUMBER 101. Choose the best answer for each question, and be sure to answer all 30 questions. POINT VALUE: 10 items ask you to interpret data presented in Tables, Bar Graphs, and Figures. Assume that there is an equal number of participants in each condition. Each of these items is worth 2 points, and their point value will be noted at the beginning of the item. The other 20 questions are worth 1 point each, yielding a total possible score of 40 points. You have Form A.

101. George wants to conduct a study using a small N design. There is only 1 participant available and only 1 situation that can be examined. Given these circumstances, George:
   a. can still use a multiple baseline across behaviors design.
   b. can still use a multiple baseline across situations design.
   c. can still use a multiple baseline across individuals design.
   d. cannot use any of the above.

102. Dr. Nguyen conducts an experiment with 3 independent variables. Participants a) perform an easy or hard task, b) do the task in a hot or cold room, and c) perform it while alone or in front of an audience. Dr. Nguyen then measures how well participants perform. Here are the 8 conditions of the study, with a number representing each cell.

<table>
<thead>
<tr>
<th></th>
<th>ALONE</th>
<th>AUDIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temp.</td>
<td>Easy</td>
<td>Hard</td>
</tr>
<tr>
<td>Hot</td>
<td>cell 1</td>
<td>cell 2</td>
</tr>
<tr>
<td>Cold</td>
<td>cell 3</td>
<td>cell 4</td>
</tr>
</tbody>
</table>

With this design, to determine whether there is a main effect of "Type of Task" what cells (conditions) would we compare?
   a. (cells 1, 2, 3, 4) versus (cells 5, 6, 7, 8)
   b. (cells 1, 2, 5, 6) versus (cells 3, 4, 7, 8)
   c. (cells 1, 3, 5, 7) versus (cells 2, 4, 6, 8)
   d. (cells 1, 4, 5, 8) versus (cells 2, 3, 6, 7)

103. In discussing program evaluation, your textbook notes that:
   a. scientists regard basic research as more prestigious than applied research; therefore there are hardly any scientists who are interested in doing program evaluation.
   b. at present, there are no research designs available that can provide meaningful information in program evaluation settings; scientists need to develop better research designs that are specifically suited for this type of applied research.
   c. because social programs typically are complex and large-scale, by their very nature they are almost impossible to evaluate.
   d. the political climate often prevents honest program evaluation; to public officials, and administrators, rigorous program evaluation can be threatening.
104. Dr. Li is conducting a study to evaluate the effectiveness of a new two month training program for firefighters in Happyville, California. The study uses a one-group pretest-posttest design. The firefighters who are participating have intentionally been selected by Dr. Li because they represent typical or average performers in the Happyville Fire Department. In other words, the best and worst firefighters were not selected for this program. By intentionally selecting his participants this way, Dr. Li has minimized the possibility that ___________ could be a confounding variable.
   a. regression to the mean
   b. testing
   c. instrumentation
   d. all of the above

105. If an experiment has a "2 x 3 x 4 factorial design," this tells you that there are:
   a. 2 independent variables, one with 3 levels and one with 4 levels.
   b. 2 independent variables with 3 levels each, and 4 dependent variables.
   c. 2 age groups, 3 manipulated independent variables, and 4 dependent variables.
   d. 3 independent variables, one with 2 levels, one with 3 levels, and one with 4 levels.
   e. 3 independent variables, with 2 levels each and 4 dependent variables.

106. (2 POINTS) Dr. Tindale conducts an experiment. 100 students from an introductory psychology course are randomly assigned to perform either a verbal task or a spatial task. For each type of task, participants are randomly assigned to perform the task either alone or in front of an audience. This produces four conditions, with 25 participants in each condition. Dr. Tindale measures the number of errors that each participant makes while performing the task. The findings are shown below. Assume that any difference between conditions of 5 errors or more is statistically significant. What do the results indicate?

![Graph showing number of errors by task and audience]

a. main effect Type of Task
b. main effect Alone/Audience
c. both main effects
d. interaction
e. interaction and main effect Type of Task
f. interaction and main effect Alone/Audience
g. interaction and both main effects
h. no main effects, no interaction
107. (2 POINTS) Suppose that the results of Dr. Tindale’s experiment had come out like this. Assume that any difference between conditions of 5 errors or more is statistically significant. What do the results indicate?

![Bar chart](image)

- main effect Type of Task
- main effect Alone/Audience
- both main effects
- interaction
- interaction and main effect Type of Task
- interaction and main effect Alone/Audience
- interaction and both main effects
- no main effects, no interaction

108. (2 Points) Suppose that the results of Dr. Tindale’s experiment had come out like this. You can assume that any difference between conditions of 5 errors or more is statistically significant. What do the results indicate?

![Bar chart](image)

- main effect Type of Task
- main effect Alone/Audience
- both main effects
- interaction
- interaction and main effect Type of Task
- interaction and main effect Alone/Audience
- interaction and both main effects
- no main effects, no interaction
109. As compared to the one-group pretest-posttest design, the simple interrupted time series design typically does a better job of controlling for (i.e., a better job of helping researchers identify the possible influence of) which of the following potential confounds?
   a. maturation
   b. regression to the mean
   c. testing
   d. all of the above
   e. none of the above

110. Which of the following occurs when the effect of one independent variable differs depending on the level of a second independent variable?
   a. main effect
   b. interaction
   c. regression to the mean
   d. instrumentation

111. In a study that uses an ABAB (i.e., Withdrawal) small-N design, the first "A" phase represents:
   a. a control group
   b. an experimental group
   c. a baseline period
   d. a treatment period
   e. a generalization phase

112. Sixty teachers at School A are given a substance abuse knowledge test in September. During the next four months, they attend four substance abuse training sessions. They are then given the knowledge test again in February. Sixty teachers at School B are also given the substance abuse knowledge test in September. They don't receive any training and are given the test again in February. This research is an example of:
   a. a true experiment
   b. a quasi experiment using a one-group pretest-posttest design
   c. a quasi experiment using a pretest-posttest design with a nonequivalent control group
   d. a quasi experiment using a one-group interrupted time series design
   e. a quasi experiment using an interrupted time series design with a nonequivalent control group.

113. Historically, applied research in psychology (i.e., “applied psychology):
   a. was already common by the early 20th century, focusing on areas such as industry, business, mental testing, and sports.
   b. rarely occurred until the start of World War II (1940's), at which time psychologists worked with the U. S. Army to develop job placement tests so that soldiers could be assigned to the tasks for which they were best suited.
   c. rarely occurred until just after World War II, at which time educational testing became common, with psychologists playing key roles in developing these tests.
   d. rarely occurred until the 1970's, at which time major industries began hiring psychologists to develop tests to improve the efficiency of employee selection.
114. A 2 x 2 mixed factorial design will always include:
   a. two manipulated independent variables
   b. one within-subjects independent variable and one between-subjects independent
      variable.
   c. one manipulated independent variable and one selected independent variable
      (i.e., one "subject" variable)
   d. two between-subjects independent variables

115. Dr. Chu conducts a study with city bus drivers in two mid-sized cities located 300 miles
     apart. All drivers take a job satisfaction survey on December 1\textsuperscript{st}. Then a new Employee
     Fitness Center (including exercise machines, a gym, etc.) is opened for the bus drivers in
     City A, who can use it for free before or after work. Two months later the bus drivers in
     both cities take the job satisfaction survey again. The results reveal increased job
     satisfaction among the drivers in City A and no overall change in satisfaction among
     drivers in City B. Unfortunately, during the two months in which this study was
     conducted, the winter weather in City A was unusually pleasant, creating easy driving
     conditions. In City B typical snowy weather made winter conditions for the bus drivers
     difficult as usual. This difference in weather between City A and City B would best
     represent an example of a potential _____________ confound.
   a. history
   b. attrition
   c. maturation
   d. history x selection
   e. history x maturation

116. Dr. Kim is conducting an evaluation of a new, multiyear statewide social program
     designed to help children from economically disadvantaged families perform better in
     grade school. During the ___________ phase of this program evaluation, Dr. Kim will be
     monitoring this program while it is still in progress. She will determine whether the
     program is being implemented as planned and examine how the program is being used.
   a. needs assessment
   b. cost-effectiveness analysis
   c. summative evaluation
   d. formative evaluation

117. Dr. Gonzales is planning to use a small N design to evaluate a treatment. She
     anticipates that the target behavior (i.e., dependent variable) is a skill which, once
     learned, will be permanently retained. In this case, what type of design should Dr.
     Gonzales use to evaluate the treatment? (NOTE: There are only 3 choices below.)
   a. She should use a multiple baseline design.
   b. She should use a withdrawal design.
   c. The withdrawal design and multiple baseline design would be equally appropriate
      in this instance.

118. A factorial design always involves:
   a. only one independent variable.
   b. two or more independent variables.
   c. two or more different research designs.
   d. two or more dependent variables.
119. (2 POINTS) Dr. Warren is interested in how well men and women can perform a verbal comprehension task under low or high stress. Dr. Warren creates (manipulates) a low and high stress condition. The dependent variable is the number of errors that participants make on the task. The results are shown below on the right. The answer options are shown below on the left. You can assume that any difference between conditions of 5 errors or more is statistically significant. What do the results indicate?

- a. main effect Stress
- b. main effect Gender
- c. both main effects
- d. interaction
- e. interaction and main effect Stress
- f. interaction and main effect Gender
- g. interaction and both main effects
- h. no main effects, no interaction

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120. (2 POINTS) Suppose that Dr. Warren's results looked liked this. Assume that any difference between conditions of 5 errors or more is statistically significant. What do the results indicate?

- a. main effect Stress
- b. main effect Gender
- c. both main effects
- d. interaction
- e. interaction and main effect Stress
- f. interaction and main effect Gender
- g. interaction and both main effects
- h. no main effects, no interaction

---

121. (2 POINTS) Suppose Dr. Warren's results looked liked this. Assume any difference between conditions of 5 errors or more is statistically significant. What do the results indicate?

- a. main effect Stress
- b. main effect Gender
- c. both main effects
- d. interaction
- e. interaction and main effect Stress
- f. interaction and main effect Gender
- g. interaction and both main effects
- h. no main effects, no interactions
122. Dr. Hendricks gives a questionnaire to participants in a Psych 101 course. She identifies students with high self esteem and students with low self esteem. She invites the high and low self esteem individuals to the lab. Participants receive $50 to use in "games of chance" and are permitted to keep their winnings at the end of the experiment. Dr. Hendricks records the size of the bets that the students make during the games. Students in the high self esteem group make larger bets than students in the low self esteem group. Dr. Hendricks concludes that low self esteem causes people to be afraid to take chances. Dr. Hendricks study is ________ and he is ________ independent variable.
   a. a true experiment; correctly drawing a causal conclusion about a manipulated
   b. a true experiment; incorrectly drawing a causal conclusion about a manipulated
   c. correlational/correctly drawing a causal conclusion about a selected
   d. correlational/incorrectly drawing a causal conclusion about a selected

123. Sometimes, when people participate in research, their behavior may be affected simply because they are receiving "special attention" by virtue of their involvement in the study. Thus, if participants' scores change from a pretest to a posttest, this may be due to this feeling of special attention rather than to the unique content of the treatment or intervention. Traditionally, this type of confound has been called
   a. a Hawthorne effect
   b. a maturation effect
   c. a Good Subject effect
   d. a Golden Glow" effect

124. (2 POINTS) Dr. Au conducts an experiment in which each participant has an hour to solve a set of math problems. Each participant performs that task in a room that is either hot or cold, and that has high or low humidity. 40 participants are randomly assigned to one of the 4 conditions in the experiment (10 participants per condition). The dependent variable is the number of problems each participant solves correctly. The Table below shows the average number of problems solved in each condition. Assume that any difference of 5 or more problems solved is statistically significant. What do the following results show?

<table>
<thead>
<tr>
<th>Humidity</th>
<th>Temperature</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot</td>
<td></td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td>Cold</td>
<td></td>
<td>25</td>
<td>5</td>
</tr>
</tbody>
</table>

   a. main effect Humidity
   b. main effect Temperature
   c. both main effects
   d. interaction
   e. interaction and main effect Humidity
   f. interaction and main effect Temperature
   g. interaction and both main effects
   h. no main effects, no interaction
125. (2 POINTS) Suppose that Dr. Au obtains the following results. What do they show?

<table>
<thead>
<tr>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
</tr>
<tr>
<td>Hot</td>
</tr>
<tr>
<td>Cold</td>
</tr>
</tbody>
</table>

a. main effect Humidity  
b. main effect Temperature  
c. both main effects  
d. interaction  
e. interaction and main effect Humidity  
f. interaction and main effect Temperature  
g. interaction and both main effects  
h. no main effects, no interaction

126. (2 POINTS) Suppose that Dr. Au obtains the following results. What do they show?

<table>
<thead>
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<tbody>
<tr>
<td><strong>Temperature</strong></td>
</tr>
<tr>
<td>Hot</td>
</tr>
<tr>
<td>Cold</td>
</tr>
</tbody>
</table>

a. main effect Humidity  
b. main effect Temperature  
c. both main effects  
d. interaction  
e. interaction and main effect Humidity  
f. interaction and main effect Temperature  
g. interaction and both main effects  
h. no main effects, no interaction

127. (2 POINTS) Suppose that Dr. Au obtains the following results. What do they show?

<table>
<thead>
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</thead>
<tbody>
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<td><strong>Temperature</strong></td>
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<tr>
<td>Hot</td>
</tr>
<tr>
<td>Cold</td>
</tr>
</tbody>
</table>

a. main effect Humidity  
b. main effect Temperature  
c. both main effects  
d. interaction  
e. interaction and main effect Humidity  
f. interaction and main effect Temperature  
g. interaction and both main effects  
h. no main effects, no interaction
128. In a factorial design with three independent variables (e.g., Variables A, B, and C) it is possible to have a maximum of ________ Main Effects.
   a. 1
   b. 2
   c. 3
   d. 4
   e. 5

129. Gamma Manufacturing Company owns two assembly plants -- Plant #1 and Plant #2, each of which has 80 workers. The workers at both plants assemble the same products and each worker assembles each particular unit from start to finish. At the end of each month the company records the number of units assembled by each worker. Overall, the workers at each plant do an equally good job, but especially in these times of a competitive global economy, Gamma wants to increase the workers' efficiency so that they will produce more products. So, to test the effectiveness of new training program, every Monday in October at Plant #1, Gamma stops production for two hours and provides all 80 workers with a new program designed to improve workers' efficiency and increase their pride in the company. Workers at Plant #2 don't receive or even know about the new program and go about their business as usual. Gamma then compares the workers' productivity at the two plants for the three months before and three months after the training program. What type of research design has Gamma used?
   a. a mixed factorial experiment
   b. a simple interrupted time series design
   c. a time-series design with nonequivalent control group design
   d. a one-group pretest-posttest design
   e. a pretest-posttest design with non-equivalent control group

130. Continuing with question #129 above, suppose that the overall performance of both plants is the same for three months before the training program. After the training program productivity at Plant #1 increases by 10% for the first month, but then for the next two months drops back down to the same level as before the training program. At Plant #2 productivity remains steady for all 6 months. Which of the following confounds most plausibly accounts for the temporary (one-month) increase in performance at Plant #1 following the treatment?
   a. attrition
   b. a selection x regression effect
   c. a Hawthorne effect
   d. a selection x instrumentation effect
   e. instrumentation
EXAM ANSWERS: SAMPLE OF WHAT THE "RECORD SHEET" WILL LOOK LIKE FOR EXAM 3
Write down your answers on this sheet. Keep this sheet in your class notebook. Use it to score your test against the answer key.
NOTE: (2) = A QUESTION WORTH TWO POINTS

101. _____           121. (2) _____
102. _____           122. _____
103. _____           123. _____
104. _____           124. (2) _____
105. _____           125. (2) _____
106. (2) _____       126. (2) _____
107. (2) _____       127. (2) _____
108. (2) _____       128. _____
109. _____           129. _____
110. _____           130. _____
111. _____
112. _____
113. _____
114. _____
115. _____
116. _____
117. _____
118. _____
119. (2) _____
120. (2) _____