

Exam 1 – Short Practice

Answer the next two questions with respect to the following paragraph.

Dr. Hook is interested in whether people read different types of material at different rates. Subjects are asked to read one humorous story, one mystery story, and one sad story, each of which was written by a different author. The stories are presented in all six possible orders, with equal numbers of subjects receiving each order. Dr. Hook records the length of time it takes subjects to read the first 100 lines of each story.

1. The dependent variable in the study is
 - a. type of story read by each subject
 - b. order in which the stories are presented
 - c. subjects' reading rates for the different types of stories**
 - d. subjects' reading comprehension for the different types of stories
 - e. none of these options

2. A confounding variable in this study is
 - a. the type of story subjects are reading
 - b. the authors of the stories**
 - c. the length of time it takes for subjects to read each story
 - d. subjects' reading comprehension
 - e. the order in which the stories are presented

Answer the next 3 questions with respect to the following paragraph.

Dr. Dick Tator wanted to study the effect of authority figures on people's job performance. He gathered a random sample of bricklayers from a construction site and had them all lay bricks under two conditions: in the presence of a supervisor and in the presence of a peer. Subjects were told that these observers would be rating their performance. For each subject, Dr. Tator tossed a coin to determine in which order the subject would perform in the two conditions: first with the peer watching and then with the supervisor watching or first with the supervisor watching and then with the peer watching. Dr. Tator, hidden from the view of the subjects, counted the number of bricks each subject laid as they were being watched.

3. The scale being used to measure the dependent variable is _____, and Dr. Tator should analyze the data using a _____.
 - a. nominal; *t* test
 - b. ratio; one-way ANOVA
 - c. ratio; dependent samples *t* test**
 - d. interval; dependent samples *t* test
 - e. interval; independent samples *t* test

4. The relationship of the observers (peer and supervisor) to the subject is
 - a. an extraneous variable that does not interfere with the internal validity of the study
 - b. the dependent variable
 - c. irrelevant because a rating scale has been determined
 - d. the independent variable**
 - e. none of these options

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5. Which of the following is true about this study

- a. this is a within subjects design
- b. the order in which subjects participate in the conditions is a controlled extraneous variable
- c. the observers are a confounding variable in the study
- d. this is a within subjects design and the order in which subjects participate in the conditions is a controlled extraneous variable**
- e. this is a within subjects design, the order in which subjects participate in the conditions is a controlled extraneous variable, and the observers are a confounding variable in the study

Answer the next three questions with respect to the following paragraph.

Clara, a social psychologist, wishes to study the effectiveness of two different methods of reducing adults' prejudice toward members of other ethnic groups. She posts a sign-up sheet in her two social psychology classes and offers students extra credit for serving as subjects. Students who sign up from the morning class are assigned to Condition 1, and students who sign up from the afternoon class are assigned to Condition 2. In Condition 1, each subject works on a task with a member of another ethnic group. In Condition 2, each subject interviews a member of another ethnic group for a fictitious job. After 30 minutes, subjects rate the intelligence and attractiveness of the person with whom they interacted, on a scale of 0 - 100 for each attribute.

6. Which of the following is true regarding this study

- a. the class section in which subjects are enrolled is a confounding variable**
- b. conditions are confounded with ethnic group
- c. there are potential problems with carryover effects
- d. the dependent variable is measured on a ratio scale
- e. it has high internal validity but low external validity

7. One of Clara's colleagues suggests that ratings of intelligence and attractiveness may not really provide a good measure of prejudice. The colleague is thus questioning

- a. the use of two measures for the dependent variable
- b. whether there might be a confounding variable present in the study
- c. the construct validity of the operational definition of the independent variable
- d. the construct validity of the operational definition of the dependent variable**
- e. the method used to assign subjects to conditions

8. Which of the following threatens the external validity of the study?

- a. social psychology students may not be a representative sample of adults in the general population
- b. people who volunteer to participate may not make up a representative sample of the general population
- c. students who are interested in extra credit may not be representative of the general population
- d. random sampling was not employed
- e. all of these options**

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Answer the next three questions with respect to the following paragraph.

Dr. Tran is studying the treatment of spider phobias. He recruits 51 spider phobics and has them choose which one of the following three treatments they would like to try: behavioral exposure to spiders only; guided imagery only; or exposure plus imagery combined. The treatments take one month. At the end of the month, Dr. Tran exposes all the subjects to a spider, and he measures changes in their heart rate. He finds no differences across the three groups.

9. Dr. Tran's measure of his dependent variable is a _____ measure, and its values lie on a _____ scale.
- a. self-report; ratio
 - b. self-report; interval
 - c. behavioral; interval
 - d. physiological; ratio**
 - e. behavioral; ratio
10. Dr. Tran's study employs a _____ design with _____ levels of the independent variable.
- a. between subjects; two
 - b. within subjects; two
 - c. between subjects; three**
 - d. within subjects; three
 - e. between subjects; but there is not enough information given to determine the number of levels
11. What can Dr. Tran conclude from his study?
- a. that all treatments worked equally well treating spider phobias
 - b. that all treatments adequately reduced fear of spiders
 - c. Dr. Tran cannot conclude anything because of self selection**
 - d. That his study suffers from ceiling effects
 - e. both that all treatments worked equally well treating spider phobias and that all treatments adequately reduced fear of spiders

Answer the next two questions with respect to the following paragraph.

Dr. Bill is a dentist interested in the tooth decay of island natives who are reported to subsist on a diet of fruits and vegetables. He travels to the island and convinces the natives there both to answer questions about their diet and to allow him to examine their teeth. In talking with the natives, however, he discovers that in recent years more and more of them have begun to eat meat as well as vegetables. So, for each native, he decide to record for how long he or she has been eating meat and the number of cavities that he or she has, and he finds that the longer a native reports that he or she has been eating meat, the more cavities he or she tends to have. Dr. Bill thus concludes that eating meat causes cavities and the longer one eats meat, the more cavities one will have.

12. In this study, how long a native has been eating meat is
- a. the predictor variable
 - b. the independent variable
 - c. a variable whose values are measured by use of a self-report measure
 - d. the predictor variable and a variable whose values are measured by use of a self-report measure**
 - e. the independent variable and a variable whose values are measured by use of a self-report measure

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13. Based on the study he conducted and the results obtained, Dr. Bill's conclusion
- is not warranted because it is not ethical to look at natives' teeth
 - is not warranted because the within-subjects design was not appropriate for the question being asked
 - is not warranted because there could be a third variable problem operating; for example, the age of the natives**
 - is not warranted because the within-subject design could have suffered from carryover effects
 - none of these options; that is, given the study conducted and the result obtained, Dr. Bill's conclusion is warranted.
14. Assume you want to design a study that requires half of your subjects to bungee jump and half to sit still. What is the way to handle the fact that some may refuse to bungee jump?
- convince them to bungee jump in the name of science
 - study something else and don't use bungee jumping in your study because it is clearly not ethical to ask anyone to bungee jump
 - allow subjects to choose which condition they want to be in
 - recruit subjects who are willing to bungee jump and then randomly assign them to either bungee jump or sit still**
 - none of these options

Answer the next two questions with respect to the following paragraph.

Havno Klu decides to do a study without having taken Psych 100B. He wants to test the hypothesis that drinking milk produces muscles and attracts members of the opposite sex, just like the commercials advertise. He recruits 500 undergraduates and has them all begin drinking 16 ounces of milk per day. After one month, he asks each subject to rate how much they have improved in muscularity and attractiveness over the last month.

15. Havno's study is not a true experiment because
- the dependent variable is measured by subjective ratings
 - there were too many subjects
 - one month is too short a time for muscle development to occur
 - there was only one level of the independent variable**
 - there may have been gender effects
16. To fix his study and change it into a true experiment, Havno should
- recruit only male subjects
 - make sure that there are equal numbers of males and females in his subject pool of 500 undergraduate subjects
 - add a condition in which no milk is consumed and randomly assign half of his 500 subjects to it**
 - have outside raters determine changes in muscularity and attractiveness according to clear operational definitions
 - measure muscularity and attractiveness as well as several other measures

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Answer the next 2 questions with respect to the following paragraph.

A researcher investigated the relationship between alcohol consumption and reaction time in a driving simulation. One group of subjects was given one ounce of alcohol to drink, another group was given three ounces of alcohol to drink, and a third group was given five ounces of alcohol to drink. They were all given the same kind of alcohol. Then, after the same amount of time had elapsed since consuming the alcohol, the researcher measured the time it took the subjects in each group to step on the brake pedal after presentation of a red light.

17. In this study, the independent variable was ____; the dependent variable was measured by ____; and an extraneous variable held constant was ____.

- a. red light; braking speed; time since alcohol consumption
- b. timing of the red light; amount of alcohol consumed; rate of alcohol consumption
- c. amount of alcohol consumed; degree of intoxication; time since alcohol consumption
- d. alcohol consumption; braking speed; time since alcohol consumption**
- e. braking speed; degree of intoxication; alcohol consumption

18. The appropriate statistical test to analyze the data would be

- a. an independent or between-subjects *t* test
- b. a dependent or within-subjects *t* test
- c. a one way ANOVA followed by appropriate posttest comparisons**
- d. a two way ANOVA followed by the appropriate posttest comparisons
- e. none of these options

19. Brent conducts a study on people's preference for sugar over saccharin. He makes a cake with real sugar and brownies with saccharin, and brings them to his local supermarket. As people walk by, Brent offers them a dollar to taste the two desserts and choose the one they prefer. Brent finds that people prefer the brownies. From this outcome, he can conclude

- a. that people prefer the taste of saccharin over the taste of sugar
- b. that people in general like the taste of both sugar and saccharin
- c. that people like brownies more than they like cake
- d. nothing because the study suffers from the presence of a confounding variable**
- e. nothing because this study should only be done as a between-subjects design

Answer the next 2 questions with respect to the following paragraph.

Sara is interested in conducting a study to investigate what type of canned cat food cats prefer. She selects two brands of canned cat food: Brand A, a fish-based cat food; and Brand B, a beefbased cat food. In the morning, she feeds 20 cats Brand A and records how much food is left after one hour. In the afternoon, she feeds 20 different cats, of the same age and type, Brand B. Again, she records how much food is left after one hour. She finds that cats eat significantly more of Brand B than Brand A.

20. What type of design has Sara used in her study?

- a. within-subjects correlational
- b. within-subjects experimental
- c. between-subjects correlational
- d. between-subjects experimental**
- e. none of these options

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21. What can Sara conclude from her study?

- a. cats prefer Brand B over Brand A
- b. cats in this study prefer Brand B over Brand A
- c. no conclusion can be drawn because the study used a between-subjects design
- d. no conclusion can be drawn because of the presence of a confounding variable in the study**
- e. no conclusion can be drawn because of the presence of possible carryover effects in the study

The next 2 questions are related

Dr. Bhatt has isolated a natural chemical (he calls it MG₄₀₀) that he believes to be involved in the regulation of body strength. He conducts a study in which he measures MG₄₀₀ concentrations in the tap water of 50 cities. He then randomly selects people who drink tap water from each city and asks them to do push-ups. He counts the number of push-ups each person can do and finds that the more MG₄₀₀ in the tap water, the more push ups people from those cities can do.

22. Dr. Bhatt can conclude that

- a. MG₄₀₀ increases body strength
- b. MG₄₀₀ increases the number of push-ups that people can do
- c. MG₄₀₀ and body strength are negatively correlated
- d. both MG₄₀₀ increases body strength and MG₄₀₀ increases the number of push-ups that people can do
- e. none of these options**

23. In this study, the criterion variable is _____ and is measured on a _____ scale.

- a. MG₄₀₀ concentration ; we can't tell what the scale is because we don't know how MG₄₀₀ was measured
- b. push ups; ordinal
- c. pushups; interval
- d. pushups; ratio**
- e. push ups; nominal

24. Andy conducts an experiment investigating the effect of presentation on test performance. He believes that studying material in graphical form may be more effective than studying the same content presented in paragraph form. He asks each subject to choose the format (graphical form or paragraph form) he/she prefers. After all subjects study the material in their chosen format for 10 minutes, Andy gives all subjects a multiple choice test to assess their knowledge of the material. He's astounded when both groups perform similarly and nearly perfectly on the test.

Which of the following is NOT TRUE about Andy's experiment?

- a. Graphical presentation is one level of the independent variable.
- b. Self-selection subject bias could be a problem in this experiment.
- c. This is a between-subjects design.
- d. Ceiling effects are a problem in this experiment.
- e. Carryover effects could be a problem in this experiment**

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Answer the next question with respect to the following paragraph

Camille believes that people stereotype others based on hair color. She creates 100 photos of various 40 year old women; 25 photos are blonde women; 25 are black haired women; 25 are red haired; 25 are grey haired women. Camille recruits a random sample of 50 subjects and has each subject view all 100 photos. Before they view the photos, she tells subjects that all the women in the photos work for major corporations, and she asks subjects to judge how powerful each woman is in the company for which she works. Subjects are given a scale of 0 (not powerful) to 10 (very powerful).

25. Which of the following are possible confounding variables in the study?

- a. the number of subjects in the study
- b. the number of photos of women with each hair color
- c. the age of the women in the photos
- d. the number of photos of women with each hair color and the age of the women in the photos
- e. none of these options are possible confounding variables in this study**

Answer the next 2 questions with respect to the following paragraph

Juan gathered 20 subjects in a room that was illuminated only by fluorescent lights. The next day he brought another 20 subjects to the same room, but this time the drapes were open and the room was filled with sunlight. On both days, Juan told the subjects that worn out car tires are a major problem for landfills and that the United States is littered with used tires for which there is no use. He then asked the subjects to write down as many new uses as they could think of for used car tires. When he collected their papers, he measured productivity by counting the number of solutions each subject had written down. He also assessed each subject's creativity by having three judges rate each solution on a five point scale, 0 being not creative and 5 being very creative.

26. This study has ___ independent variables and ___ dependent variables

- a. 1 ; 2**
- b. 2 ; 1
- c. 2 ; 2
- d. 1 ; 1
- e. 1 ; we can't tell how many dependent variables there are because we do not know how many solutions each subject wrote down

27. The judges in this experiment

- a. are an extraneous variable that is held constant
- b. should be kept blind to the conditions experienced by each subject
- c. must be evaluated to ensure inter-rater reliability
- d. should be kept blind to the conditions experienced by each subject and must be evaluated to ensure inter-rater reliability
- e. are an extraneous variable that is held constant, should be kept blind to the conditions experienced by each subject, and must be evaluated to ensure inter-rater reliability**

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The next three questions are related to the following paragraph:

Dr. Hershey ran an experiment in a lab at UCLA to find out how the price of a food can affect perceived quality. He recruited participants for a chocolate tasting study. Before the participants tasted the chocolate, he told half of them that it was made in Switzerland and each piece cost \$15. The other half were told that it was made in California and each piece cost 25 cents. Even though everyone tasted the same vanilla flavored milk chocolate, the participants who were told each piece cost \$15 overwhelmingly rated the chocolate highly while those told it cost 25 cents rated it as inferior. After subjects gave their rating they were invited to eat as much of the chocolate as they wanted before leaving the lab.

28. Which of the following statement/s is/are true

- a. the results indicate experimenter bias
- b. the study suffers from self selection bias
- c. **telling the participants where the chocolate was made introduced a confounding variable into the study**
- d. the flavor of chocolate subjects taste is confounded across conditions
- e. all of these options are true

29. The independent variable in this study is

- a. The participants' perception of the quality of the chocolate
- b. **The price of the chocolate as described to the participants**
- c. The type of chocolate given to the participants
- d. The actual expense of the chocolate given to the participants
- e. The participants' perception of the quality of the chocolate and the price of the chocolate as described to the participants

30. What is/are confounding variable(s) in this study?

- a. flavor of the chocolate
- b. **location subjects are told that the chocolate was made**
- c. the amount of chocolate subjects eat after giving their rating
- d. location of the study
- e. all of these options are confounding variables in this study

31. Dr. Sees heard about the chocolate study. She was curious about both price and the color of the box in which chocolate is served and how those might influence perceived quality. She designed a study in which subjects were randomly assigned to one of four conditions. Subjects were all given the same chocolate, but half were told it cost 25 cents and half were told it cost \$7.00. Each subject was presented the chocolate in a small box. Half of those told it cost 25 cents got the chocolate in a white box and half got it in a black box. Likewise for those who were told it cost \$7.00; half got it in a white box and half got it in a black box. They then rated how much they liked the taste of the chocolate on a scale from 0 – 100. This study is a

- a. 2X2 mixed subjects factorial design
- b. **2X2 between subjects factorial design**
- c. 2X2 within subjects factorial design
- d. 2X2X2 between subjects factorial design
- e. 2X2X2 within subjects factorial design

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Answer the next 5 questions with respect to the following paragraph

Bartenders, police officers, and hospital workers routinely identify people who are intoxicated by their slurred speech. Al Kohol, Ph.D., has found that even self-proclaimed experts are pretty bad at estimating how much alcohol people have consumed by the way they talk. He asked a group of people who treat chemical dependency to listen to all of the recordings made by four groups of volunteers. One group of volunteers was recorded when they were sober (they had consumed 0 drinks in one hour), another group was recorded while mildly intoxicated (they had consumed 3 drinks in one hour), the third group was recorded while legally impaired (they had consumed 5 drinks in one hour), and the fourth group was recorded while completely drunk (they had consumed 7 drinks in one hour). The listeners, who treated chemical dependencies, were asked to categorize how drunk they thought each speaker was, identifying them as sober, mildly intoxicated, legally impaired, or completely drunk. Listeners consistently overestimated the intoxication level of mildly intoxicated subjects. Also, they underestimated the intoxication levels of those who were completely drunk.

32. In this study there is/are

- a. one independent variable with two levels
- b. one independent variable with four levels**
- c. one independent variable with one level
- d. one independent variable with three levels
- e. two independent variables, each with two levels

33. The dependent variable is

- a. measured on a nominal scale
- b. measured on an ordinal scale**
- c. measured on an interval scale
- d. measured on a ratio scale
- e. there is no dependent variable

34. This study

- a. is a between subjects design
- b. is a within subjects design**
- c. is partly between subjects and partly within subjects
- d. is a correlational study
- e. lacks inter-rater reliability

35. Because the study included recordings of sober volunteers

- a. he introduced a confounding variable
- b. the study is holding the extraneous variable of intoxication constant
- c. the study probably suffers from subject bias
- d. the problem of carryover effects is eliminated
- e. none of these options**

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36. Because listeners overestimated the intoxication level of mildly intoxicated subjects and underestimated the intoxication levels of those who were completely drunk, this demonstrates

- a. experimenter bias
- b. demand characteristics
- c. specific item effects
- d. both floor and ceiling effects
- e. **none of these options**

Answer the next 4 questions with respect to the following paragraph

Dr. Ang studied the effects of exercise on stress levels in people with high pressure jobs who were suffering from stress-related complaints. 200 subjects agreed to participate for 10 weeks. He randomly divided the subjects into four groups. Fifty of the subjects were asked to not exercise for 10 weeks, 50 of the subjects were asked to exercise 15 minutes per day, 50 were asked to exercise 30 minutes a day, and 50 were asked to exercise 60 minutes per day. Dr. Ang measured subjects' cortisol levels (a stress hormone) both before and after the study. He found that across the four groups cortisol levels dropped with more exercise; he was surprised that even in the group that only exercised 15 minutes per day, there was a significant reduction in the hormone.

37. In this study there is/are _____ independent variable(s), each with _____ levels.

- a. 4 ; 1
- b. **1 ; 4**
- c. 1 ; 2
- d. 2 ; 2
- e. 2 ; 4

38. Which of the following are extraneous variables in the study

- a. **The type of exercise subjects did**
- b. The amount of time subjects exercised per day
- c. The amount of change in subjects' cortisol levels
- d. All of these options are extraneous variables
- e. Only the type of exercise subject did and the amount of change in subjects' cortisol levels are extraneous variables

39. The appropriate statistical test for this study is

- a. Independent samples t test
- b. Dependent samples t test
- c. One-way within-subjects ANOVA followed by appropriate post tests
- d. **One-way between-subjects ANOVA followed by appropriate post tests**
- e. One-way mixed-subjects ANOVA followed by appropriate post tests

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40. If Dr. Ang had not randomly assigned subjects to the conditions, but rather had allowed them to decide which condition they wanted to be in, the study would have suffered from

- a. Specific item effects
- b. Selection effects**
- c. Ceiling effects
- d. Experimenter bias
- e. Problems associated with self report measures