

ARIZONA STATE UNIVERSITY (ASU) PSY290 RESEARCH METHODS EXAM 1 PRACTICE (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. Which of the following is NOT a reason why basing one's conclusions on research is superior to intuition?**
 - A. Research is objective.
 - B. Intuition always leads to correct conclusions.
 - C. Research minimizes bias.
 - D. Research provides replicable results.
- 2. What cycle describes the relationship between theory and data as practiced by Franchesca in her study?**
 - A. Research cycle
 - B. Theory-data cycle
 - C. Empirical cycle
 - D. Hypothetical cycle
- 3. In Latecia's study, what is the term used for the prediction she makes about the participants' behavior?**
 - A. Theory
 - B. Hypothesis
 - C. Observation
 - D. Conclusion
- 4. In Professor Nakum's memory experiment, what is the independent variable?**
 - A. The number of words recalled
 - B. The performance of math problems
 - C. The type of word list
 - D. The duration of study time
- 5. The number of decision tasks performed in the experiment is categorized as which type of variable?**
 - A. A controlled variable
 - B. An independent variable
 - C. A measured variable
 - D. A categorical variable

- 6. Which characteristic is crucial for distinguishing scientific journals from magazines?**
- A. Popularity among readers
 - B. Peer review process
 - C. Colorful illustrations
 - D. Entertainment value
- 7. What does a researcher's "bias" refer to?**
- A. A tendency to conduct research without a hypothesis
 - B. A preference for a certain outcome affecting research objectivity
 - C. The use of statistical data in research
 - D. An objective viewpoint in research
- 8. When Franchesca's study results align with her hypothesis about mindfulness, what can be inferred about the theory being tested?**
- A. The theory has been disproven
 - B. The theory is solely anecdotal
 - C. The theory is supported by the data
 - D. The theory requires a revision
- 9. Which question focuses on construct validity?**
- A. Is the sample size adequate?
 - B. How well has the researcher measured or manipulated the variables in the study?
 - C. Are the results replicable across different studies?
 - D. What is the statistical significance of the findings?
- 10. What would a scatterplot look like if there is a significant negative correlation between scores of a coin-rotation task and a finger-tapping task?**
- A. Cloud of points would slope upward
 - B. Cloud of points would slope downward
 - C. Cloud of points would be scattered randomly
 - D. Cloud of points would form a straight line

Answers

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1. B
2. B
3. B
4. C
5. C
6. B
7. B
8. C
9. B
10. B

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Explanations

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1. Which of the following is NOT a reason why basing one's conclusions on research is superior to intuition?

- A. Research is objective.
- B. Intuition always leads to correct conclusions.**
- C. Research minimizes bias.
- D. Research provides replicable results.

Basing conclusions on research is regarded as superior to intuition for several important reasons, and identifying why one of the options does not fit into this framework is key for understanding research methods. The statement that intuition always leads to correct conclusions is the one that does not align with the principles of sound research practices. Intuition is often influenced by personal experiences, emotions, and cognitive biases, which can lead to incorrect assumptions and conclusions. In contrast, research is designed to minimize these subjective influences. Research is characterized by objectivity, meaning that it strives to measure and analyze data without personal bias. It employs systematic methodologies that are grounded in scientific rigor, thus making findings more credible and reliable than those derived purely from intuition. Moreover, research includes methodologies that are designed to minimize bias, ensuring that results are not skewed by researchers' personal beliefs or expectations. It also emphasizes the importance of replicable results, allowing other researchers to duplicate studies and verify findings, which strengthens the validity of the conclusions drawn. Therefore, while intuition can be a quick way to arrive at a conclusion, it lacks the structured, systematic approach offered by research, making the notion that intuition always leads to correct conclusions a flawed premise.

2. What cycle describes the relationship between theory and data as practiced by Franchesca in her study?

- A. Research cycle
- B. Theory-data cycle**
- C. Empirical cycle
- D. Hypothetical cycle

The theory-data cycle is a critical concept in research methodology that illustrates how theoretical frameworks and data collection interact and inform one another. In this cycle, researchers begin with a theory that offers predictions about behavior or phenomena. They then collect data to test these predictions. When the results of the data collection provide support for the theory, it strengthens the existing theory and may lead to further research questions. If the data do not support the theory, it can prompt revisions or new hypotheses, ultimately leading to adjustments in the theoretical framework. This iterative process is essential in the scientific method, ensuring that research findings contribute to the evolution of theories in a field. By recognizing Franchesca's study as following the theory-data cycle, it highlights the reciprocal relationship between the empirical data she gathered and the theoretical groundwork she was building upon or testing. This emphasizes the dynamic nature of research, where theories are continually refined based on empirical evidence.

3. In Latecia's study, what is the term used for the prediction she makes about the participants' behavior?

- A. Theory
- B. Hypothesis**
- C. Observation
- D. Conclusion

In research methodology, a hypothesis is a specific, testable prediction about the expected outcome of a study. It serves as a foundational component of the research process, guiding the direction of the study and informing the methodology. In Latecia's study, the prediction she makes about the participants' behavior represents a hypothesis because it proposes a clear relationship between variables that can be tested through empirical observation. A hypothesis is formulated based on existing theories or previous research, aiming to contribute to the understanding of a certain phenomenon. In contrast, a theory is a broader conceptual framework that explains a general phenomenon and is usually supported by many studies. Observation refers to the act of watching and recording behaviors, and a conclusion is drawn at the end of a study based on the analysis of data collected, summarizing the findings. These distinctions clarify why the term focusing on Latecia's prediction is hypothesis.

4. In Professor Nakum's memory experiment, what is the independent variable?

- A. The number of words recalled
- B. The performance of math problems
- C. The type of word list**
- D. The duration of study time

In experimental research, the independent variable is the factor that researchers manipulate to observe its effect on the dependent variable. In the case of Professor Nakum's memory experiment, the type of word list is the independent variable because it represents the different conditions or categories being tested to see how they influence the participants' ability to recall words. This manipulation allows the researcher to explore whether different types of word lists (for example, emotionally charged words versus neutral words) impact memory recall, which in this context would be measured by the number of words recalled, the dependent variable. By changing the type of word list, the researcher can directly assess its effect on participants' performance in recalling those words.

5. The number of decision tasks performed in the experiment is categorized as which type of variable?

- A. A controlled variable
- B. An independent variable
- C. A measured variable**
- D. A categorical variable

In research methodologies, the number of decision tasks performed in an experiment is categorized as a measured variable because it reflects the outcome of the experiment's manipulation and is typically quantified during data collection. Measured variables represent the characteristics or behaviors that researchers observe and record. In this context, the number of tasks is not something that is manipulated by the researcher but is instead recorded as one of the experimental outcomes or observations, allowing for analysis of how this quantity relates to other variables involved in the study. While a controlled variable refers to factors that are kept constant to isolate the effects of the independent variable, and an independent variable is one that the researcher changes to observe effects on the dependent variable, the number of decision tasks does not fit these definitions. A categorical variable is typically used to categorize or group data into distinct categories rather than measuring a quantity, which further differentiates it from the number of decision tasks, as this involves numerical quantification.

6. Which characteristic is crucial for distinguishing scientific journals from magazines?

- A. Popularity among readers
- B. Peer review process**
- C. Colorful illustrations
- D. Entertainment value

The peer review process is a fundamental characteristic that distinguishes scientific journals from magazines. In scientific journals, articles submitted for publication undergo a rigorous evaluation by experts in the field before being accepted. This process ensures that the research is of high quality, credible, and contributes meaningfully to the body of knowledge within a specific discipline. Peer review helps to maintain academic standards and provides an essential check against misinformation or poorly conducted studies. In contrast, magazines may prioritize accessibility and entertainment value, focusing more on engaging a broader audience rather than adhering to strict scientific methodology. As a result, while magazines can certainly inform and educate, they do not generally require the same level of scrutiny and validation that scientific journals uphold through the peer review process. This distinction is crucial for readers seeking reliable, evidence-based information.

7. What does a researcher's "bias" refer to?

- A. A tendency to conduct research without a hypothesis
- B. A preference for a certain outcome affecting research objectivity**
- C. The use of statistical data in research
- D. An objective viewpoint in research

A researcher's "bias" refers specifically to a preference for a certain outcome that can influence how they conduct their research and interpret their findings. This bias can manifest in various ways, such as selecting data that supports their preconceived notions while ignoring or downplaying data that contradicts them, thereby compromising the objectivity that is vital in scientific research. Bias may also arise in the formulation of research questions, the choice of methodology, and the framing of results. Understanding the concept of bias is critical because it can lead to flawed conclusions and affect the overall credibility of the research. Recognizing and mitigating bias is essential for researchers to ensure the integrity of their work and the validity of their contributions to the scientific community.

8. When Franchesca's study results align with her hypothesis about mindfulness, what can be inferred about the theory being tested?

- A. The theory has been disproven
- B. The theory is solely anecdotal
- C. The theory is supported by the data**
- D. The theory requires a revision

When the study results align with Franchesca's hypothesis about mindfulness, it indicates that the data gathered supports her theory. This means that the findings reinforce the idea that mindfulness has the effects that the hypothesis suggested. In scientific research, when results corroborate a hypothesis, it strengthens the validity of the theory being tested, providing empirical evidence that adds credibility to the existing understanding. The alignment of the study's results with the hypothesis does not indicate that the theory is disproven or solely anecdotal; rather, it suggests that there is an empirical foundation behind the theory. Additionally, the inferring that a theory requires revision usually occurs when results do not support the initial hypothesis or reveal new insights that complicate existing beliefs. Therefore, the correct answer emphasizes the supportive evidence that consistent outcomes provide for a tested theory.

9. Which question focuses on construct validity?

- A. Is the sample size adequate?
- B. How well has the researcher measured or manipulated the variables in the study?**
- C. Are the results replicable across different studies?
- D. What is the statistical significance of the findings?

The focus on construct validity pertains specifically to how effectively a study measures or manipulates the theoretical constructs it aims to examine. In this context, option B is correct because it directly addresses the core issue of whether the operational definitions and measurement techniques used in a study accurately capture the constructs they are intended to reflect. Construct validity is crucial for determining the strength of the inferences that can be drawn from the study. When researchers assess how well they have measured or manipulated variables, they are essentially evaluating the alignment between theoretical concepts and their practical counterparts in the study. Ensuring strong construct validity helps researchers confirm that the findings are relevant and applicable to the constructs they were intended to represent. The other options do not directly relate to the measurement of constructs. Adequate sample size pertains to statistical power and generalizability, replicability touches on the consistency of findings across studies, and statistical significance relates to the probability that the observed results are not due to chance. Each of these aspects is important for different reasons in research methodology, but they do not specifically assess how well a study captures the constructs being measured.

10. What would a scatterplot look like if there is a significant negative correlation between scores of a coin-rotation task and a finger-tapping task?

- A. Cloud of points would slope upward
- B. Cloud of points would slope downward**
- C. Cloud of points would be scattered randomly
- D. Cloud of points would form a straight line

A significant negative correlation between scores of a coin-rotation task and a finger-tapping task indicates that as the score in one task increases, the score in the other task tends to decrease. In the context of a scatterplot, this relationship is visually represented by a cloud of points that slopes downward from left to right. This downward slope shows that higher scores on the coin-rotation task align with lower scores on the finger-tapping task, showcasing the inverse relationship between the two variables. In practice, when you plot each participant's scores for both tasks, you would expect to see clusters of points trending downward, reflecting this negative association. The more pronounced the negative correlation, the steeper the downward slope of the cloud of points. Other possible representations of the data, such as an upward slope or random scattering, would not accurately reflect the relationship described by a negative correlation. Additionally, a straight line would indicate a perfect correlation, which is not the scenario when only a significant correlation is mentioned.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://asu-psy290exam1.examzify.com>

We wish you the very best on your exam journey. You've got this!

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