

SAS Clinical Trials Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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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 summary statistic can PROC UNIVARIATE output for continuous data?**
 - A. Odds ratios**
 - B. Median values**
 - C. Contingency tables**
 - D. P-values**

- 2. Why is laboratory data important in clinical trials?**
 - A. It helps determine pricing models for medications**
 - B. It is used to identify non-compliant participants**
 - C. It provides quantifiable data regarding patients' health**
 - D. It is irrelevant to the study's outcome**

- 3. What is a defining feature of a double-blind trial?**
 - A. Patients know their treatment**
 - B. Doctors know the treatment being given**
 - C. Both patients and doctors do not know the treatment**
 - D. Only researchers know the treatment**

- 4. How does PROC UNIVARIATE handle data sets with frequency variables?**
 - A. It automatically normalizes the data**
 - B. It creates summary statistics without frequency consideration**
 - C. It allows analysis including frequency variable in calculations**
 - D. It discards frequency variables in outputs**

- 5. What does the output from PROC UNIVARIATE include regarding histogram intervals?**
 - A. Summary statistics and histogram intervals**
 - B. Only histogram plots**
 - C. Data transformation details**
 - D. Raw data point counts**

- 6. Which statement best characterizes the role of the investigator in a trial?**
- A. They manage the financial reporting of the trial**
 - B. They are solely responsible for patient recruitment**
 - C. They oversee the conduct of the clinical trial at a site**
 - D. They design the trials without regulatory oversight**
- 7. Which of the following events qualifies as a serious adverse event (SAE)?**
- A. Headache requiring over-the-counter medication**
 - B. Life-threatening reaction requiring hospitalization**
 - C. Mild nausea that subsides quickly**
 - D. Transient rash not resulting in medical intervention**
- 8. What does the Drug Assignment Data Set indicate in clinical trials?**
- A. Which drug was approved by regulatory bodies**
 - B. Which patients are eligible for future studies**
 - C. Which patient received which drug**
 - D. Which drug was associated with adverse effects**
- 9. What is often found in a statistical analysis plan (SAP)?**
- A. Clinical trial recruitment goals**
 - B. Details of inferential analyses to be performed**
 - C. Patient medication adherence tracking**
 - D. Standard operating procedures**
- 10. Which type of trial allows a patient to receive both treatments being compared?**
- A. Double blind trial**
 - B. Crossover trial**
 - C. Parallel trial**
 - D. Single blind trial**

Answers

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

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Explanations

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1. Which summary statistic can PROC UNIVARIATE output for continuous data?

- A. Odds ratios**
- B. Median values**
- C. Contingency tables**
- D. P-values**

PROC UNIVARIATE is a powerful SAS procedure that is designed for exploratory data analysis of continuous data. One of its primary functions is to calculate and output descriptive statistics, which includes the median. The median is a measure of central tendency that represents the middle value in a dataset when the values are ordered. It provides a robust summary of the data, especially in the presence of outliers, and is particularly useful for understanding the distribution of continuous variables. In the context of PROC UNIVARIATE, the procedure can produce a variety of descriptive statistics for continuous data, including measures such as the mean, standard deviation, minimum, maximum, and, importantly, the median. This capability makes it an essential tool for clinical data analysis, where understanding the characteristics of continuous variables is crucial for drawing insights about a population or treatment effects. The other options mentioned do not fall within the summary statistics typically output by PROC UNIVARIATE. For instance, odds ratios pertain to categorical data and are most commonly derived from logistic regression analysis, while contingency tables are used to summarize relationships between two categorical variables. P-values arise from hypothesis testing and are reported in the context of various statistical tests but are not direct summary statistics calculated by PROC UNIVARIATE for continuous data.

2. Why is laboratory data important in clinical trials?

- A. It helps determine pricing models for medications**
- B. It is used to identify non-compliant participants**
- C. It provides quantifiable data regarding patients' health**
- D. It is irrelevant to the study's outcome**

Laboratory data is crucial in clinical trials because it provides quantifiable measurements that reflect the health status and biological responses of participants. This data allows researchers to monitor the effectiveness of an intervention, such as a new medication or treatment, by comparing laboratory results before and after the intervention. For instance, changes in biomarkers, blood chemistry, or other physiological metrics can indicate whether a treatment is producing the desired effects or if there are any adverse reactions. By analyzing this quantitative data, researchers can make informed decisions about the safety and efficacy of the studied treatment, which is fundamental for regulatory approvals and clinical guidelines. In contrast, other options do not directly address the primary role of laboratory data in assessing treatment effects and participant health within the context of clinical trials. While there may be some peripheral connections to pricing models or compliance, these aspects do not emphasize the immediate importance of laboratory data in evaluating medical outcomes.

3. What is a defining feature of a double-blind trial?

- A. Patients know their treatment
- B. Doctors know the treatment being given
- C. Both patients and doctors do not know the treatment**
- D. Only researchers know the treatment

A defining feature of a double-blind trial is that both patients and doctors do not know the treatment being given. This design is crucial for minimizing bias in clinical trials. When neither the participants nor the healthcare providers are aware of who receives the treatment or the placebo, it ensures that the outcomes observed can be more reliably attributed to the treatment itself rather than external influences or expectations. This blinding process helps in maintaining the integrity of the study, as it reduces the potential for biases that could arise from knowledge about treatment allocation. For instance, if a doctor knows which patients are receiving the active treatment, they might unintentionally influence outcomes through their interactions or assessments of those patients. Similarly, if patients know they are receiving a particular treatment, their expectations might alter their perception of the treatment effect. In this context, other options imply that either the patients or doctors have knowledge of the treatment, which could introduce biases and compromise the study's validity. Hence, the essence of a double-blind trial is the mutual ignorance of both parties regarding treatment assignments, ensuring a controlled environment for evaluating the efficacy and safety of the interventions being tested.

4. How does PROC UNIVARIATE handle data sets with frequency variables?

- A. It automatically normalizes the data
- B. It creates summary statistics without frequency consideration
- C. It allows analysis including frequency variable in calculations**
- D. It discards frequency variables in outputs

PROC UNIVARIATE is a powerful procedure in SAS used for examining the distribution of data and generating descriptive statistics. When it comes to handling data sets that include frequency variables, the procedure provides the capability to incorporate these variables into the analysis, thus allowing more accurate computation of summary statistics and statistical tests based on the frequency of occurrence. When frequency variables are included in a data set, PROC UNIVARIATE can utilize these frequencies to provide a weighted analysis. This means that the procedure can properly account for how many times each observation appears in the data, ensuring that the resulting statistics, such as means, medians, and standard deviations, reflect the distribution of the data according to these frequencies. This functionality is crucial for datasets where certain values might be more prevalent than others, as it ensures that the analysis conveys a true representation of the data rather than treating all observations as equal. By allowing the analysis to incorporate frequency variables, PROC UNIVARIATE delivers insights that are more aligned with the real-world scenarios being studied. Other choices do not offer the same depth of capability or accuracy when it comes to analyzing data sets that include frequency variables. This makes the inclusion of frequency variable handling in PROC UNIVARIATE an essential feature for conducting robust statistical analyses.

5. What does the output from PROC UNIVARIATE include regarding histogram intervals?

- A. Summary statistics and histogram intervals**
- B. Only histogram plots**
- C. Data transformation details**
- D. Raw data point counts**

The output from PROC UNIVARIATE includes summary statistics as well as histogram intervals, making the selection accurate. When you run this procedure, it provides a comprehensive analysis of the data, which includes measurements like mean, median, mode, standard deviation, and various percentiles. Additionally, PROC UNIVARIATE generates histograms that visually represent the distribution of the data across specified intervals. This combination of statistical summary and visual representation is essential in understanding the underlying patterns and characteristics of the data being analyzed, which is crucial in clinical trial data assessments. Other options, while important aspects of data analysis, do not encapsulate the complete output of PROC UNIVARIATE. Some focus solely on limited features (like histograms or raw data counts) and do not account for the integrated nature of summary statistics and histogram intervals that PROC UNIVARIATE specifically delivers.

6. Which statement best characterizes the role of the investigator in a trial?

- A. They manage the financial reporting of the trial**
- B. They are solely responsible for patient recruitment**
- C. They oversee the conduct of the clinical trial at a site**
- D. They design the trials without regulatory oversight**

The role of the investigator in a clinical trial is fundamentally centered on overseeing the conduct of the trial at their respective site. Investigators are primarily responsible for ensuring that the trial is carried out in compliance with the study protocol, Good Clinical Practice (GCP), and applicable regulatory requirements. This includes managing the day-to-day operations of the trial, ensuring the safety and welfare of the participants, monitoring data integrity, and making certain that the trial's procedures are followed as intended. In addition to these responsibilities, investigators play a critical role in ensuring that participant rights are respected, and they often serve as a point of contact for any issues that arise during the trial. Their involvement is essential in maintaining the trial's adherence to scientific and ethical standards. While investigators may be involved in aspects of patient recruitment, it is generally a collaborative effort involving multiple team members; thus, characterizing them as solely responsible does not accurately reflect the collaborative nature of clinical trials. Investigators also typically work within a framework established by sponsors and regulatory bodies, meaning they are not free to design trials without oversight. Additionally, financial reporting is usually handled by administrative or finance teams rather than the investigators themselves.

7. Which of the following events qualifies as a serious adverse event (SAE)?

- A. Headache requiring over-the-counter medication**
- B. Life-threatening reaction requiring hospitalization**
- C. Mild nausea that subsides quickly**
- D. Transient rash not resulting in medical intervention**

A serious adverse event (SAE) is defined as any untoward medical occurrence that results in death, is life-threatening, requires hospitalization, results in disability or permanent damage, or requires intervention to prevent permanent damage. The correct choice, which involves a life-threatening reaction requiring hospitalization, meets this definition comprehensively. This type of event indicates a significant health risk that could potentially lead to serious outcomes, underscoring the importance of monitoring adverse reactions closely in clinical trials. Hospitalization due to a life-threatening reaction reflects the gravity of the situation and necessitates immediate medical attention, making it a paramount concern in safety evaluations of clinical interventions. In contrast, the other choices highlight less severe adverse events that do not fall under the criteria for an SAE. Headaches treated with over-the-counter medication and mild nausea that resolves quickly are typically considered minor and generally do not indicate a serious health risk. Similarly, a transient rash that does not require medical intervention similarly lacks the severity and risk profile characteristic of an SAE.

8. What does the Drug Assignment Data Set indicate in clinical trials?

- A. Which drug was approved by regulatory bodies**
- B. Which patients are eligible for future studies**
- C. Which patient received which drug**
- D. Which drug was associated with adverse effects**

The Drug Assignment Data Set plays a crucial role in the context of clinical trials by detailing which patients received which specific drug or treatment during the study. This information is essential for analyzing the efficacy and safety of the drug being tested, as it allows researchers to correlate outcomes with the treatments administered. It supports the integrity of the trial by ensuring that the allocation of therapies is transparent and traceable, which is vital for data analysis and study conclusions. Additionally, this dataset often encompasses information such as randomization details, dose levels, and treatment timelines, which are necessary for the statistical analysis of the clinical trial results. Thus, it is an integral part of understanding the relationship between drug administration and clinical outcomes, making it fundamental for the proper interpretation of the trial's findings.

9. What is often found in a statistical analysis plan (SAP)?

- A. Clinical trial recruitment goals
- B. Details of inferential analyses to be performed**
- C. Patient medication adherence tracking
- D. Standard operating procedures

In a statistical analysis plan (SAP), details of inferential analyses to be performed are included as a fundamental aspect. The SAP outlines the statistical methods and analyses that will be applied to the data collected during a clinical trial. This includes specifying which statistical tests will be used, how hypotheses will be tested, and how data will be handled, including any methods for addressing missing data or outliers. The purpose of the SAP is to ensure a clear and predetermined approach to the analysis, thereby minimizing bias and enhancing the reproducibility of results. By detailing the inferential analyses, the SAP serves as a roadmap for statisticians and researchers to follow once the data is collected, which is crucial for the integrity of the study findings. This clarity helps ensure that all stakeholders understand how the data will be analyzed and interpreted at the conclusion of the trial.

10. Which type of trial allows a patient to receive both treatments being compared?

- A. Double blind trial
- B. Crossover trial**
- C. Parallel trial
- D. Single blind trial

A crossover trial is designed specifically to allow patients to receive both treatments being compared during the course of the study. In this type of trial, participants receive one treatment for a certain period, followed by a washout period, after which they receive the other treatment. This design is particularly beneficial because it allows each participant to serve as their own control, which can reduce variability and improve the accuracy of the comparison between the two treatments. The structure of a crossover trial enables researchers to assess the effects of both interventions on the same individual, which can lead to more robust conclusions regarding the efficacy and safety of the treatments. This design is ideal for conditions where the effects of treatments can be reversible and not cumulative over time. In contrast, the other types of trials do not allow for patients to receive both treatments. For instance, in a parallel trial, participants are randomly assigned to different groups that either receive one treatment or another, without crossover. Similarly, double blind and single blind trials can be either parallel or crossover, but they primarily focus on masking treatments to reduce bias rather than allowing for both treatments to be administered to a single participant.

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://sasclinicaltrials.examzify.com>

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

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