SAS Base Exam Certification Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

Table of Contents

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

1. What does the DISTINCT keyword do in PROC SQL?

A. It groups datasets together

B. It eliminates duplicate values from the result set

C. It sorts data in ascending order

D. It limits the number of columns returned

2. What is the function of the SET statement in a SAS data step?

A. To create a new data set

B. To append data from a new source

C. To read observations from an existing data set

D. To define a new variable format

3. In SAS, what does the PROC PRINT procedure do?

A. Calculates statistical measures

B. Displays the contents of a dataset

C. Redefines variables

D. Deletes observations from the dataset

4. In which steps can you use an IF statement or WHERE statement?

A. Only in PROC steps

B. Only in DATA steps

C. In both DATA steps and PROC steps

D. Only in DATA steps, if the input dataset is referenced

5. Which statement is used to read data from an existing SAS dataset?

A. DATA statement

B. PROC statement

C. INPUT statement

D. SET statement

6. What is the output syntax for summing variables using a variable list in SAS?

A. Total = sum(of qtr1, qtr2, qtr3, qtr4)

B. Total = sum(qtr1 to qtr4)

C. Total = sum(of qtr1 - qtr4)

D. Total = sum(qtr1 + qtr2 + qtr3 + qtr4)

7. What does the SCAN function do in SAS?

A. Counts the number of words in a string

B. Returns a specific word from a character value

C. Joins multiple strings into one

D. Removes specified characters from a string

8. Which option is the correct way to comment out a line of code in SAS?

A. /* This is a comment */

B. -- This is a comment

C. // This is a comment

D. ** This is a comment **;

9. What is the purpose of the FIND function in SAS?

A. To extract a substring from a string

B. To search for a specific substring within a string

C. To replace characters in a string

D. To check for missing values in a dataset

10. What happens to new variables in the PDV before the next observation is read?

A. They are set to zero

B. They are initialized to missing

C. They retain their previous values

D. They are eliminated

Answers

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

Explanations

1. What does the DISTINCT keyword do in PROC SQL?

A. It groups datasets together

B. It eliminates duplicate values from the result set

C. It sorts data in ascending order

D. It limits the number of columns returned

The DISTINCT keyword in PROC SQL is used to eliminate duplicate values from the result set. When a query is executed with the DISTINCT keyword, it ensures that each row in the result set is unique, preventing any repeated values based on the columns specified in the SELECT statement. This is particularly useful when you're only interested in unique combinations of values, such as when summarizing or filtering a dataset to only show distinct entries. For instance, if you have a table containing multiple entries for the same customer and you want to retrieve a list of unique customers, using SELECT DISTINCT customer_name FROM customers; would yield a list where each customer appears only once, regardless of how many times they are recorded in the dataset. This functionality contrasts with grouping datasets, sorting data, or limiting the number of columns, which are not the roles of the DISTINCT keyword. Each of those actions serves different purposes within SQL queries, such as organizing the output or focusing on specific attributes, but they do not directly address the elimination of duplicate entries.

2. What is the function of the SET statement in a SAS data step?

A. To create a new data set

B. To append data from a new source

C. To read observations from an existing data set

D. To define a new variable format

The SET statement in a SAS data step is primarily used to read observations from an existing data set. When you include a SET statement in your data step, you are instructing SAS to access data from a specified data set, effectively pulling in all rows and columns of that data set for processing. This allows you to manipulate the data, create new variables, or perform analyses based on the contents of that existing data set. When using the SET statement, you can also combine it with additional SAS programming techniques to create new data sets, summarize data, or merge information from multiple data sources. However, its main function is to facilitate reading data so that subsequent processing can occur smoothly within the data step. The other options might relate to the overall data manipulation process in SAS but do not correctly define the specific function of the SET statement. For instance, while creating a new data set or appending data could occur within a data step, it is achieved through other statements and processes, not directly by the SET statement itself. Similarly, defining new variable formats pertains to formatting data and is handled by format statements rather than the SET statement.

3. In SAS, what does the PROC PRINT procedure do?

A. Calculates statistical measures

B. Displays the contents of a dataset

C. Redefines variables

D. Deletes observations from the dataset

The PROC PRINT procedure in SAS is designed specifically to display the contents of a dataset. When invoked, it generates a printed output that shows the data in a tabular format, allowing users to view the values contained in each observation and variable. This procedure is commonly used for data inspection and validation, providing a straightforward way to quickly review and verify the data you are working with. The functionality it provides is fundamental for users who need to confirm that the data has been entered correctly, identify any anomalies, or simply understand the structure and content of the dataset. Unlike statistical procedures or data manipulation methods, PROC PRINT's primary role is simply to present the data without performing any calculations or transformations.

4. In which steps can you use an IF statement or WHERE statement?

A. Only in PROC steps

B. Only in DATA steps

C. In both DATA steps and PROC steps

D. Only in DATA steps, if the input dataset is referenced

The correct response indicates that both IF statements and WHERE statements can be utilized in both DATA steps and PROC steps, highlighting flexibility in SAS to conditionally process data in different contexts. In a DATA step, an IF statement allows for conditional execution of statements based on the evaluation of specified conditions, enabling tailored data manipulation and transformation. For instance, you can create new variables or filter records based on certain criteria right in the DATA step. Similarly, a WHERE statement can be applied in PROC steps to filter observations that meet specified conditions before analysis. This allows you to limit the data processed by statistical procedures without altering the original dataset. Therefore, when using PROC SQL or any other procedures, you can efficiently work with only the relevant observations. This versatility in utilizing both IF and WHERE statements across different steps in SAS allows for optimized data management and reporting, making the tool powerful for data analysis.

5. Which statement is used to read data from an existing SAS dataset?

A. DATA statement

B. PROC statement

C. INPUT statement

D. SET statement

The SET statement is used to read data from an existing SAS dataset. When you want to process or manipulate data that is already stored in a SAS dataset, the SET statement allows you to access that dataset directly within a DATA step. By using the SET statement, you can perform operations such as data transformation, subset selection, and variable creation or modification, all while retaining access to the original dataset. For example, if you have a dataset named "sales_data" and you want to create a new dataset that includes modified or additional variables based on the existing data, you would use the SET statement to read "sales_data" into your DATA step. This allows you to reference and work with the data easily. Other statements, such as the DATA statement, are vital for creating new datasets or defining programming blocks, while the PROC statement typically invokes a procedure that performs analysis or reporting on data. The INPUT statement is used specifically for reading raw data into a SAS dataset during the data step, not for accessing existing datasets. Thus, the SET statement is the most appropriate choice for reading from an existing SAS dataset.

6. What is the output syntax for summing variables using a variable list in SAS?

A. Total = sum(of qtr1, qtr2, qtr3, qtr4)

B. Total = sum(qtr1 to qtr4)

C. Total = sum(of qtr1 - qtr4)

D. Total = sum(qtr1 + qtr2 + qtr3 + qtr4)

The correct syntax for summing variables using a variable list in SAS is designed to efficiently specify a range of variables. In this case, using "of qtr1 - qtr4" is the proper way to reference a set of contiguous variables. This syntax not only succinctly signifies the variables from qtr1 through qtr4 but also clearly instructs SAS to treat them as a collective entity when performing the sum operation. This approach leverages SAS's capability to handle variable ranges, which is particularly useful when there are many variables that follow a sequential naming pattern. The "of" keyword, combined with the dash to indicate a range, allows for cleaner and more manageable code. In contrast, other choices involve either incorrect use of syntax or do not adhere to the concise conventions SAS offers for handling multiple variables. Specific references to individual variables or using the incorrect method of summation would produce errors or not yield the expected results. The choice that employs "of qtr1 - qtr4" aligns with SAS's syntax and best practices for summing a sequence of variables effectively.

7. What does the SCAN function do in SAS?

A. Counts the number of words in a string

B. Returns a specific word from a character value

C. Joins multiple strings into one

D. Removes specified characters from a string

The SCAN function in SAS is specifically designed to return a specific word from a character string. It operates by extracting the words from the string based on specified delimiters, which are typically spaces, commas, or other characters that separate words. The function takes two primary arguments: the string from which to extract the word and the position of the word to return. For example, if you have a string like "SAS programming is fun" and you want to extract the second word, you would use SCAN with the appropriate arguments to return "programming." This focused functionality is essential for data manipulation and analysis, allowing users to handle text data effectively by easily accessing individual components within strings. The other choices, while they deal with string manipulation, do not accurately describe the purpose of the SCAN function. Counting words, joining strings, or removing characters are tasks that are handled by other, different functions in SAS, further emphasizing SCAN's unique role in extracting specific words from strings.

8. Which option is the correct way to comment out a line of code in SAS?

A. /* This is a comment */

B. -- This is a comment

C. // This is a comment

D. ** This is a comment **;

In SAS, the correct way to comment out a line of code is to use the syntax that begins and ends with slashes and asterisks, like in the example provided. This means that any text placed between /* and */ will be treated as a comment and not executed as part of the code. This style allows for multi-line comments as well, which is particularly useful for documenting larger sections of code or for temporarily disabling parts of it during testing or debugging. The other options do not conform to SAS syntax. The usage of double dashes (--) for comments is characteristic of SQL and some other programming languages but is not valid in SAS. The use of double slashes (//) is also not applicable in SAS code; this style is more common in languages like C++ or Java for single-line comments. Lastly, while asterisks and semicolons can denote comments in SAS, the structure " This is a comment **;" does not follow the correct commenting format; the comment should instead be enclosed within the proper delimiters. Thus, the use of /* comments */ is the standard method in SAS for effectively commenting out code.**

9. What is the purpose of the FIND function in SAS?

A. To extract a substring from a string

B. To search for a specific substring within a string

C. To replace characters in a string

D. To check for missing values in a dataset

The FIND function in SAS is designed specifically to search for a specific substring within a string. It returns the starting position of the substring if it is found, or a value of zero if the substring is not present. This functionality is essential for string manipulation and data analysis tasks where identifying the presence or location of a substring in text data is necessary. In contrast, other options refer to different string handling functionalities: extracting a substring is accomplished using the SUBSTR function, replacing characters involves the TRANSLATE or REPLACE functions, and checking for missing values is done using the MISSING function or specific checks in data step programming. Thus, the FIND function stands out for its targeted purpose of substring search within the vast array of string functions available in SAS.

10. What happens to new variables in the PDV before the next observation is read?

A. They are set to zero

B. They are initialized to missing

C. They retain their previous values

D. They are eliminated

In the Program Data Vector (PDV) of SAS, new variables are initialized to missing before the next observation is read. This process is important because it ensures that each time a new observation is processed, any previously unassigned variables do not carry over values from previous observations, which could lead to incorrect analysis. When a new observation is read into the PDV, SAS creates a new logical space for the data and initializes any new variables. This feature helps maintain data integrity and ensures that results derived from the data reflect only the current observation. Consequently, if those variables have not been assigned a value in the current iteration, they will be missing, allowing for clear identification of missing data during analysis. This behavior is essential for proper data management and analysis within the SAS environment, making it easier for programmers to handle variable initialization within their data steps.

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://sasbase.examzify.com

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