# SAS BASE PROGRAMMING CERTIFICATION PRACTICE EXAM (SAMPLE)

## STUDY GUIDE




## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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# 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!

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# Questions

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1. **In a SAS DATA step, which statement is used to incrementally calculate totals?**

   A. total=total+var1;

   B. total=sum(var1);

   C. total=total+var1+var2;

   D. total=increment(total,var1);

2. **When reading data lines with multiple date formats, what is a correct YEARCUTTOFF value?**

   A. 1910

   B. 1925

   C. 1926

   D. All of the above

3. **What is the purpose of the Trailing @ Modifier in SAS?**

   A. To hold the current input line for further processing

   B. To skip the next line of data input

   C. To read data until a specified delimiter is found

   D. To finalize reading input data

4. **What does the ODS statement enable you to do within SAS?**

   A. Create output in various forms

   B. Generate graphics exclusively

   C. Only produce text files

   D. Manage database connections

5. **Which of the following statements about PROC FREQ is true?**

   A. It calculates statistical means for numeric variables

   B. It provides frequency counts for categorical data

   C. It is similar to PROC MEANS but for continuous variables

   D. It requires numeric variables only

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**6. Which line of code is required to initialize the variable Total to 0 in the provided SAS program?**

A. Keep Total;

B. Retain Total 0;

C. Total = 0;

D. IF _N_ = 1 THEN Total = 0;

**7. Which output destination is default for ODS in SAS?**

A. HTML

B. PDF

C. RTF

D. CSV

**8. What is the function of the MISSOVER option in the INFILE statement?**

A. Skips over missing data when reading the file

B. Prevents SAS from reading beyond the end of a row

C. Processes data line by line without skipping records

D. Indicates the end of input for a dataset

**9. What does the ABS function return in SAS?**

A. The average value of the numbers

B. The smallest value of a set

C. The absolute value of a number

D. The factorial of a number

**10. What is the main difference between using the SET and MERGE statements in a DATA step?**

A. SET stacks data sets; MERGE combines them;

B. SET is faster than MERGE;

C. MERGE can only be used with sorted data;

D. SET requires BY variables;

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# Answers

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

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# Explanations

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**1. In a SAS DATA step, which statement is used to incrementally calculate totals?**

A. total=total+var1;

B. total=sum(var1);

C. total=total+var1+var2;

D. total=increment(total,var1);

*In a SAS DATA step, the statement that accurately reflects an incremental calculation of totals is defined through the syntax representing cumulative addition of values. The choice that most clearly expresses this is to add variables together with a pre-existing total, which is reflected in the syntax of total=total+var1+var2. This method ensures that each time the DATA step iterates, the current values of var1 and var2 are added to the existing total. This approach is effective because it not only updates the total based on the current iteration but also accounts for multiple variables, thus providing a cumulative sum in each pass through the data. Using this form, you can dynamically aggregate totals as the DATA step processes each record, aligning perfectly with the concept of incremental calculation. By continuously updating the total with both var1 and var2, you receive a comprehensive running total that reflects the contributions of both variables during the entire execution of the DATA step. In contrast, other options may not accurately represent the incremental updating process or may use SAS functions that do not achieve the same result as a simple arithmetic cumulative total calculation.*

**2. When reading data lines with multiple date formats, what is a correct YEARCUTTOFF value?**

A. 1910

B. 1925

C. 1926

D. All of the above

*The YEARCUTTOFF option in SAS is used to specify a cutoff year for two-digit year values during data reading and conversion. This option tells SAS how to interpret two-digit years so that they map appropriately to four-digit years. When setting the YEARCUTTOFF, any two-digit year value that is greater than or equal to this cutoff will be interpreted as belonging to the 1900s, while any value less than the cutoff will be interpreted as belonging to the 2000s. For instance, with a YEARCUTTOFF of 1925, a two-digit year of 25 would be interpreted as 2025, while a two-digit year of 24 would be interpreted as 1924. The key aspect of this question is that all of the provided cutoff values—1910, 1925, and 1926—can indeed serve as valid options for YEARCUTTOFF, as they can each lead to appropriate interpretations of varying two-digit year values, depending on the dataset being processed. Therefore, each of these cutoff values can be correct under different circumstances or specific datasets that feature various two-digit years. This means that the correct response encompasses each of the choices, indicating that any of the proposed YEARCUTTOFF*

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## 3. What is the purpose of the Trailing @ Modifier in SAS?

A. To hold the current input line for further processing

B. To skip the next line of data input

C. To read data until a specified delimiter is found

D. To finalize reading input data

*The purpose of the Trailing @ Modifier in SAS is indeed to hold the current input line for further processing. When you use a trailing @ in an input statement, it instructs SAS to keep the current line of data in the input buffer instead of reading the next line immediately. This is particularly useful when reading multi-line records or when you need to perform additional operations on the data in the current line before proceeding with the next line. For example, when working with data that spans across several lines, you may want to read part of the data, perform calculations or manipulate it, and then decide when to actually read the next line. By using the Trailing @, you can control the flow of data input and prevent SAS from advancing to the next line until you're ready. This functionality enables more flexibility in how input data is managed and processed within your SAS program. It is especially valuable in scenarios where you may need to read multiple pieces of information from the same line or when processing data formats that do not have clean line breaks between records.*

## 4. What does the ODS statement enable you to do within SAS?

A. Create output in various forms

B. Generate graphics exclusively

C. Only produce text files

D. Manage database connections

*The ODS (Output Delivery System) statement in SAS is a powerful tool that enables users to generate output in a variety of formats. This includes not only standard text output but also HTML, PDF, RTF, and Excel formats, among others. By using the ODS statement, users can control how their results and reports are presented, allowing for flexibility and enhanced readability of results. This versatility makes it suitable for producing highly customizable outputs to meet different reporting needs and preferences. The other options simplify the capabilities of the ODS statement. While graphics can be generated as part of the output, the ODS is not limited to graphics alone; it encompasses a much broader range of output formats. Additionally, it does not focus solely on producing text files, as it can create various file types. Finally, it does not serve the purpose of managing database connections, which falls under different SAS functions and procedures. As such, the ability of the ODS statement to create output in many forms is what sets it apart as the correct choice.*

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## 5. Which of the following statements about PROC FREQ is true?

A. It calculates statistical means for numeric variables

B. It provides frequency counts for categorical data

C. It is similar to PROC MEANS but for continuous variables

D. It requires numeric variables only

*PROC FREQ is a procedure in SAS that is specifically designed to analyze categorical data. It generates frequency counts, which indicate how often each value (or category) occurs within a dataset. This is particularly useful for understanding the distribution of categorical variables, such as nominal and ordinal data types. In addition to frequency counts, PROC FREQ can also provide proportions, cumulative frequencies, and display information in various formats, like tables and charts. By summarizing the data in this way, it allows users to gain insights into the distributions of different categories and see comparisons among them effectively. The other options do not correctly describe the capabilities of PROC FREQ. For instance, it does not calculate statistical means for numeric variables—that function falls under the remit of PROC MEANS. Additionally, PROC FREQ is not similar to PROC MEANS, as the latter is used for continuous numeric variables, emphasizing averages and other statistics rather than counts of categories. Lastly, PROC FREQ can handle both numeric and character values; it is not limited to numeric variables alone. Hence, the statement about its focus on providing frequency counts for categorical data accurately represents the purpose and functionality of PROC FREQ.*

## 6. Which line of code is required to initialize the variable Total to 0 in the provided SAS program?

A. Keep Total;

B. Retain Total 0;

C. Total = 0;

D. IF _N_ = 1 THEN Total = 0;

*The line of code that initializes the variable Total to 0 in a SAS program must ensure that the variable retains its value throughout the data step iterations. By using the "Retain" statement in conjunction with the assignment of a value, you can ensure that Total is set to 0 for the first iteration and retains that value for subsequent iterations of the data step. The "Retain Total 0;" line of code serves this purpose effectively. It both initializes Total to 0 and retains that value across iterations of the data step, which is important when processing multiple rows of data where you want the variable to keep its previous value instead of being reset to missing for each new observation. Other options do not provide the same functionality: simply setting Total with "Total = 0;" in a standard assignment would initialize it but not retain the value through iterations. The condition "IF _N_ = 1 THEN Total = 0;" would also only set the value of Total to 0 for the first observation, but it wouldn't retain the value in a scenario where later iterations might change it. Similarly, using "Keep Total;" does not initialize or set any value; it just specifies that the variable should be kept in the output dataset.*

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## 7. Which output destination is default for ODS in SAS?

A. HTML

B. PDF

C. RTF

D. CSV

*The default output destination for the Output Delivery System (ODS) in SAS is HTML. This means that when you produce results from your SAS programs, they will be directed to an HTML file automatically unless you specify a different destination. The HTML destination is particularly beneficial because it allows for interactive and well-formatted output that can easily include graphics and links, enhancing the readability and usability of your results. This makes it a preferred choice for many users, especially when viewing results in a web browser. Other output formats such as PDF, RTF, and CSV can definitely be used by specifying them in your ODS statements, but they are not the default. PDF is often used for static reports that require precise formatting, RTF is suitable for editing in word processors, and CSV is useful for data exports, but none of these are automatically set as the output destination in SAS.*

## 8. What is the function of the MISSOVER option in the INFILE statement?

A. Skips over missing data when reading the file

B. Prevents SAS from reading beyond the end of a row

C. Processes data line by line without skipping records

D. Indicates the end of input for a dataset

*The MISSOVER option in the INFILE statement is designed to enhance how SAS reads data files. When MISSOVER is specified, SAS will not advance to a new line until it has reached the end of the current line of input, effectively preventing it from looking for additional data that may not be present. This is particularly useful when dealing with fixed-width data files, where certain fields may not fill an entire row. By using MISSOVER, SAS reads the data line by line, ensuring it processes only the data in the current row and does not erroneously attempt to populate variables with data from subsequent rows if the current row is short. The key function of this option is to maintain control over how the data is read and to avoid unexpected results from misaligned data. It ensures that if the specified number of variables is not met in a row, SAS simply fills the missing values with user-defined missing indicators instead of advancing to the next line. This behavior helps maintain the integrity of data processing in situations where row lengths may vary.*

## 9. What does the ABS function return in SAS?

A. The average value of the numbers

B. The smallest value of a set

C. The absolute value of a number

D. The factorial of a number

*The ABS function in SAS is designed to return the absolute value of a given number. The absolute value is the non-negative value of a number without regard to its sign, meaning it transforms any negative input into a positive output while leaving positive inputs as is. For example, if you use the ABS function on -5, the result will be 5, and if you apply it to 3, the result remains 3. This function is particularly useful in various mathematical calculations where the sign of the number is not significant, such as in distance calculations or normalization processes. Understanding the purpose of the ABS function helps in managing data where the magnitude of values needs to be considered without their sign, reinforcing its utility in a wide range of analytical scenarios in SAS.*

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**10. What is the main difference between using the SET and MERGE statements in a DATA step?**

A. SET stacks data sets; MERGE combines them;

B. SET is faster than MERGE;

C. MERGE can only be used with sorted data;

D. SET requires BY variables;

*The distinction between the SET and MERGE statements in a DATA step fundamentally revolves around how they process and combine datasets. When utilizing the SET statement, SAS reads data from one or more datasets sequentially and stacks them on top of each other. This allows all observations from the specified datasets to be appended into a single output dataset, where each observation retains its original structure and attributes. In contrast, the MERGE statement is designed to combine datasets based on shared BY variable values, effectively merging them horizontally. This method aligns observations with the same values of the BY variables, creating a new dataset where the columns from the merged datasets are combined according to these keys. The nuances of using SET and MERGE are crucial for manipulating datasets effectively in SAS. While the stacking behavior of SET allows accumulation of data from multiple sources, the merging capability of MERGE facilitates a more relational-like integration based on specific criteria. Other potential answers reference specifics around performance and data requirements. For instance, while MERGE does require the datasets to be sorted by the BY variables before execution, this does not fundamentally define the operational difference between SET and MERGE. The performance speed is context-dependent and can vary based on many factors beyond just the nature of the statement used. The requirement for BY*

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# 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://sasbaseprogramming.examzify.com

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

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