



# SAS A00-282

## SAS CLINICAL TRIALS PROGRAMMING PROFESSIONAL CERTIFICATION QUESTIONS & ANSWERS

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### Exam Summary – Syllabus – Questions

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**A00-282**

**SAS Clinical Trials Programming Professional**  
**60-70 Questions Exam – 68% Cut Score – Duration of 110 minutes**

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## Know Your A00-282 Certification Well:

The A00-282 is best suitable for candidates who want to gain knowledge in the SAS Programming. Before you start your A00-282 preparation you may struggle to get all the crucial SAS Clinical Trials Programming Professional materials like A00-282 syllabus, sample questions, study guide.

But don't worry the A00-282 PDF is here to help you prepare in a stress free manner.

The PDF is a combination of all your queries like-

- What is in the A00-282 syllabus?
- How many questions are there in the A00-282 exam?
- Which Practice test would help me to pass the A00-282 exam at the first attempt?

Passing the A00-282 exam makes you SAS Clinical Trials Programming Professional. Having the SAS Clinical Trials Programming Professional certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

## A00-282 SAS Clinical Trials Programming Professional Certification Details:

<b>Exam Name</b>	SAS Certified Professional - Clinical Trials Programming Using SAS 9.4
<b>Exam Code</b>	A00-282
<b>Exam Duration</b>	110 minutes
<b>Exam Questions</b>	60-70
<b>Passing Score</b>	68%
<b>Exam Price</b>	\$180 (USD)
<b>Books</b>	<a href="#">Fundamentals of Programming in SAS</a> <a href="#">SAS Programming in the Pharmaceutical Industry</a> <a href="#">Implementing CDISC Using SAS</a> <a href="#">Validating Clinical Trial Data Reporting with SAS</a>
<b>Exam Registration</b>	<a href="#">Pearson VUE</a>
<b>Sample Questions</b>	<a href="#">SAS Clinical Trials Programming Professional Certification Sample Question</a>
<b>Practice Exam</b>	<a href="#">SAS Clinical Trials Programming Professional Certification Practice Exam</a>

## A00-282 Syllabus:

Objective	Details	Weight
<b>Clinical Trials Process</b>	<ul style="list-style-type: none"> <li>- Describe the clinical research process (phases, key roles, key organizations).</li> <li>- Derive programming requirements from an SAP and an annotated Case Report Form.</li> </ul>	<b>5%</b>
<b>Clinical Trials Data Structures</b>	<ul style="list-style-type: none"> <li>- Identify the clinical trials domains.</li> <li>- Identify key CDISC principals and terms.</li> <li>- Describe the structure and purpose of the CDISC SDTM data model.</li> <li>- Describe the structure and purpose of the CDISC ADaM data model.</li> <li>- Trace data through the full programming process, from raw data to any of the mapped domains.</li> </ul>	<b>10%</b>
<b>Regulatory Submissions</b>	<ul style="list-style-type: none"> <li>- Apply regulatory requirements to exported SAS data sets (SAS V5 requirements).</li> <li>- Describe the contents and purpose of define.xml.</li> </ul>	<b>5%</b>
<b>Manage Clinical Trials Data</b>	<ul style="list-style-type: none"> <li>- Access DICTIONARY Tables using the SQL procedure.</li> <li>- Examine and explore clinical trials input data (find outliers, missing vs. zero values).                             <ul style="list-style-type: none"> <li>• Use DATA STEP functions and features to find anomalous values or to find potential errors.</li> </ul> </li> </ul>	<b>5%</b>
<b>Transform or Summarize Clinical Trials Data</b>	<ul style="list-style-type: none"> <li>- Derive variables by applying categorization and windowing techniques to existing variables.</li> <li>- Store dates in a form that is acceptable for use with clinical trials                             <ul style="list-style-type: none"> <li>• Determine if dates are stored in accordance with ISO 8601 standards</li> <li>• Use functions to store dates using ISO 8601 standards</li> </ul> </li> <li>- Reshape SAS data sets:                             <ul style="list-style-type: none"> <li>• with PROC TRANSPOSE</li> <li>• with arrays in the DATA step.</li> </ul> </li> <li>- Calculate 'change from baseline' results.</li> <li>- Obtain counts of events in clinical trials.</li> <li>- Use FIRST./LAST. variables</li> </ul>	<b>15%</b>
<b>Apply Statistical Procedures for Clinical Trials</b>	<ul style="list-style-type: none"> <li>- Use SAS procedures to obtain descriptive statistics for clinical trials data (FREQ, UNIVARIATE, MEANS, SUMMARY).</li> <li>- Given information on data types (categorical vs. quantitative), determine whether a procedure can produce the requested analysis.</li> <li>- Given sample code from a statistical procedure, identify syntax and/or semantic errors. (PROC FREQ,</li> </ul>	<b>15%</b>

Objective	Details	Weight
	<p>PROC TTEST, GLM, REG)</p> <ul style="list-style-type: none"> <li>- Create output data sets from statistical procedures.                             <ul style="list-style-type: none"> <li>• ODS OUTPUT</li> <li>• OUTPUT statements or options within a procedure</li> </ul> </li> <li>- Follow instructions to be able to program for both Safety and Efficacy data.</li> </ul>	
<p><b>Macro Programming for Clinical Trials</b></p>	<ul style="list-style-type: none"> <li>- Create macro variables and set macro parameters.</li> <li>- Access user-defined and automatic variables.</li> <li>- Automate repeated tasks by defining and calling macros.</li> <li>- Use system options to debug macros and display values of macro variables in the SAS log (MPRINT, SYMBOLGEN, MLOGIC).</li> </ul>	<p><b>15%</b></p>
<p><b>Report Clinical Trials Results</b></p>	<ul style="list-style-type: none"> <li>- Use PROC REPORT to produce tables and listings for clinical trials reports.                             <ul style="list-style-type: none"> <li>• Apply options in the REPORT statement to modify the report style.</li> <li>• Use COLUMN statement to select report items, assign aliases to report items, nest report items, and create headers for one or more report items.</li> <li>• Use DEFINE statement to apply options to report items. E.g., usages, styles, sort order.</li> <li>• Use BREAK and RBREAK statements to add summary rows.</li> <li>• Use COMPUTE blocks to execute programming statements during the creation of the report.</li> <li>• Use LINE statements to insert new lines into a report.</li> <li>• Use CALL DEFINE statements to modify the contents or aesthetics of the report.</li> <li>• Produce a data set using the OUT= option.</li> </ul> </li> <li>- Use ODS statements to produce and augment clinical trials reports.                             <ul style="list-style-type: none"> <li>• Use ODS TRACE to identify output object attributes.</li> <li>• Use ODS SELECT/EXCLUDE to produce desired output objects.</li> <li>• Use ODS statements to open/close an ODS destination (e.g., PDF, RTF, POWERPOINT, LISTING, WORD) and control destination-specific settings. (e.g., resolution, number of columns, pagination)</li> </ul> </li> </ul>	<p><b>10%</b></p>

Objective	Details	Weight
	<ul style="list-style-type: none"> <li>• Use the ODS GRAPHICS statement to control graphics environment options.</li> </ul> <p>- Create and work with graphs</p> <ul style="list-style-type: none"> <li>• Use PROC SGPLOT or PROC SGPANEL to create standard graphs using VBARBASIC/HBARBASIC, VBARPARAM/HBARPARAM, VBOX/HBOX, HISTOGRAM, DENSITY, SCATTER, SERIES, HIGHLOW, WATERFALL)</li> <li>• Use statements and options in PROC SGPLOT and PROC SGPANEL to create graphs based on grouped data and modify their appearance.</li> <li>• Create graphs that include an overlay of multiple graphical elements, including reference lines</li> <li>• Use statements and options to modify the attributes of graphical elements, customize axes, and customize legends.</li> </ul>	
<p><b>Validate Clinical Trial Data Reporting</b></p>	<ul style="list-style-type: none"> <li>- Explain the principles of programming validation in the clinical trial industry.</li> <li>- Utilize the log file to validate clinical trial data reporting.</li> <li>- Use programming techniques to validate clinical trial data reporting (PROC COMPARE, MSGLEVEL).</li> <li>- Determine why two independent validation programs led to a different result.</li> <li>- Identify elements that are not validated when comparing via PROC COMPARE. (titles, footnotes, and attributes such as formats or labels depending on how they are added to a PROC-like REPORT)</li> <li>- Identify and Resolve data, syntax, and logic errors.</li> </ul>	<p><b>20%</b></p>

## SAS A00-282 Sample Questions:

### Question: 1

What information can be found in the SAS Dictionary tables?

There are two correct answer, Please select two correct answer.

- a) datasets contained within a specified library
- b) values contained within a specified format
- c) variables contained within a specified dataset
- d) values contained within a specified variable

**Answer: a, c**

**Question: 2**

What is the main focus of Good Clinical Practices (GCP)?

- a) harmonized data collection
- b) standard analysis practices
- c) protection of subjects
- d) standard monitoring practices

**Answer: c**

**Question: 3**

Given the following data set:

SUBJID	GENDER	AGE	TRT
4	M	63	3
4	M	63	1
5	F	72	4
1	F	45	1
3	M	57	2
2	F	39	1
3	M	57	2

The following output data set was produced:

SUBJID	GENDER	AGE	TRT
3	M	57	1
3	M	57	1
4	M	63	2
4	M	63	0
5	F	72	3

Which SAS program produced this output?

- a) `proc sort data=one(where=(age>50)) out=two;`  
`by subjid;`  
`run;`
- b) `proc sort data=one(if=(age>50)) out=two;`  
`by subjid;`  
`run;`
- c) `proc sort data=one out=two;`  
`where=(age>50) ;`  
`by subjid;`  
`run;`
- d) `proc sort data=one out=two;`  
`if age>50;`  
`by subjid;`  
`run;`

**Answer: a**

**Question: 4**

Which program will report all created output objects in the log?

- a) `proc ttest data=WORK.DATA1 ods=trace;`  
`class TREAT;`  
`var RESULTS;`  
`run;`
- b) `ods trace on;`  
`proc ttest data=WORK.DATA1;`  
`class TREAT;`  
`var RESULTS;`  
`run;`
- c) `ods trace=log;`  
`proc ttest data=WORK.DATA1;`  
`class TREAT;`  
`var RESULTS;`  
`run;`
- d) `ods trace log;`  
`proc ttest data=WORK.DATA1;`  
`class TREAT;`  
`var RESULTS;`  
`run;`

**Answer: b**

**Question: 5**

The following question will ask you to provide a line of missing code. The following program is submitted to output observations from data set ONE that have more than one record per patient.

```
proc sort data=one out=two;
  by subjid;
run;
data two;
  set two;
  <insert code here>
  if (first.subjid ne 1 or last.subjid ne 1) then output ;
run ;
```

Please enter the line of code that will correctly complete the program.

Note: Case is ignored. Do not add leading or trailing spaces to your answer.

- a) `BYSUBJID;`
- b) `id;`  
`PTON run;`
- c) `BYSUBJID;`  
`BYSUBJID;`
- d) `BYSUBJID;`  
`run;`

**Answer: a**



**Question: 6**

Review the following procedure format:

```
PROC TTEST date=date;
class group-variable;
var variable;
run;
```

What is the required type of data for the variable in this procedure?

- a) Character
- b) Continuous
- c) Categorical
- d) Treatment

**Answer: b**

**Question: 7**

The following SAS program is submitted:

```
proc univariate data=work.STUDY;
by VISIT;
class REGION TREAT;
var HBA1C GLUCOS;
run;
```

You want to store all calculated means and standard deviations in one SAS data set. Which statement must be added to the program?

- a) output mean std;
- b) ods output mean=m1 m2 std=s1 s2;
- c) output out=WORK.RESULTS mean=m1 m2 std=s1 s2;
- d) ods output out=WORK.RESULTS mean=m1 m2 std=s1 s2;

**Answer: c**

**Question: 8**

Vital Signs are a component of which SDTM class?

- a) Special Purpose
- b) Events
- c) Interventions
- d) Findings

**Answer: d**

**Question: 9**

Given the data set WORK.BP with the following variable list:

#	Variable	Type	Len	Label
1	DIABP	Num	8	Diastolic Blood Pressure
2	PTNO	Char	4	Patient Number
3	SYSBP	Num	8	Systolic Blood Pressure

The following SAS program is submitted:

```
ods select ExtremeObs;
proc univariate data=WORK.BP;
var DIABP;
id PTNO;
run;
```

Which output will be created by the program?

A.

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
68	190	119	51

B.

Extreme Observations					
Lowest			Highest		
Value	PTNO	Obs	Value	PTNO	Obs
68	6007	190	119	2710	51

C.

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
62	129	112	60
63	8	114	4
63	133	114	147
65	22	115	287
68	190	119	51

D.

Extreme Observations					
Lowest			Highest		
Value	PTNO	Obs	Value	PTNO	Obs
62	5023	129	112	3020	60
63	1890	8	114	1701	4
63	5029	133	114	5109	147
65	2201	22	115	8077	287
68	6007	190	119	2710	51

- a) Option A
- b) Option B
- c) Option C
- d) Option D

**Answer: d**

**Question: 10**

Which SAS program will apply the data set label 'Demographics' to the data set named DEMO?

- a) data demo (label='Demographics');  
set demo;  
run;
- b) data demo;  
set demo (label='Demographics');  
run;
- c) data demo (label 'Demographics') ;  
set demo;  
run;
- d) data demo; set demo;  
label demo= 'Demographics' ;  
run;

**Answer: a**

## Study Guide to Crack SAS Clinical Trials Programming Professional A00-282 Exam:

- Getting details of the A00-282 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the A00-282 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the SAS provided training for A00-282 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the A00-282 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on A00-282 practice tests is must. Continuous practice will make you an expert in all syllabus areas.

## Reliable Online Practice Test for A00-282 Certification

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