



Tips, Trips, and Traps:

Preparing to Take an ASQ Certification Examination



My Assumptions About You

- You will decide to sit for a certification examination
- You will read every piece of certification material (e.g., brochures, Web pages) that ASQ makes available on a particular certification
- *You will study for the certification examination*



When Should I Take the Examination?

“Later, rather than sooner”



How Do I Start Preparing?

- Have you been reading *Quality Progress* cover-to-cover?
- Have you been reading *Quality Engineering* and other journals that are pertinent to your upcoming examination?



Develop a Review Plan

- Sort the list of topics in the BOK by your level of knowledge about the topic
- Select topics for in-depth review
- Develop a review schedule



Bloom's Taxonomy

- Categorizes the level of abstraction of questions that commonly occur in educational settings
- Provides a useful structure in which to categorize test questions because the certification exam asks questions within particular levels



Knowledge

- Observation and recall of information
- Knowledge of dates, events, places
- Knowledge of major ideas
- Mastery of subject matter
- Question cues
 - list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.



Comprehension

- Understand information
- Grasp meaning
- Translate knowledge into new context
- Interpret facts, compare, contrast
- Order, group, infer causes
- Predict consequences
- Question cues
 - summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend



Application

- Use information
- Use methods, concepts, theories in new situations
- Solve problems using required skills or knowledge
- Questions cues
 - apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover



Analysis

- See patterns
- Organize parts
- Recognize hidden meanings
- Identify components
- Question cues
 - analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer



Synthesis

- Use old ideas to create new ones
- Generalize from given facts
- Relate knowledge from several areas
- Predict, draw conclusions
- Question cues
 - combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite



Evaluation

- Compare and discriminate between ideas
- Assess value of theories, presentations
- Make choices based on reasoned argument
- Verify value of evidence
- Recognize subjectivity
- Question cues
 - assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize



Sort the List of Topics in the BOK

- First, review the list of major topics in the BOK
- Second, rank the topics by your knowledge level
 - Assign a “1” (lowest number) to the topic that you are most familiar with, and assign the highest number to the topic with which you are least familiar



Topics in the BOK

CQA-Biomedical BOK Section	Number of Test Questions	Knowledge Level
Base Law and Regulations	45	3
Standards and Guidance	20	4
Auditing Techniques and Compliance Programs for Medical Devices	15	1
Technical Knowledge	20	2



Select Topics for In-depth Review

- My rule of thumb is to perform a detailed review of the least-familiar topics that comprise approximately 50% of the examination



Develop a Review Schedule

- My rule of thumb is to assign a minimum of 4 hours of review time to a subject with which I am most familiar for each 10% of the test
- Double the allotted time to 8 hours for each 10% of the test for subjects needing an in-depth review



Review Time by Topic

CQA-Biomedical BOK Section	Percent of Test	Type of Review	Review Time
Base Law and Regulations	45	In-depth	36 hours
Standards and Guidance	20	In-depth	16 hours
Auditing Techniques	15	Regular	6 hours
Technical Knowledge	20	Regular	8 hours



Review Schedule

Task	Start Date	End Date	Hours
Create study plan; obtain and organize reference materials	6/1	8/13	16
Review Base Law and Regulations	8/14	9/10	36
Review Standards and Guidance	9/11	9/24	16
Review Auditing Techniques	9/25	10/1	6
Review Technical Knowledge	10/2	10/8/	8
Perform final review and make preparations	10/9	10/15	8
Take examination	10/16	10/16	4



How Much Review Time Is Required?

- The amount of review and preparation time required to pass a certification examination is different for each individual
- The required preparation time depends on the following factors:
 - Your understanding of quality fundamentals
 - Your understanding of the topics for the certification examination
 - The relevance of your work experience to your certification examination
 - The productivity of your review time



Time Estimates

- Initially, plan on reviewing 8 hours per week
- After your first month of reviewing, check your progress
 - If, at this time, you believe you should have no problem passing the examination, then continue reviewing 8 hours per week
 - If passing looks difficult or unachievable, you should increase your review time to 12 to 16 hours per week or more



Books

- Many teaching professionals believe that it takes at least three passes through a book to know the material:
 - First reading the book for "sense" and to obtain an overview
 - Second reading to draw out the important points
 - Third reading during which you actively question yourself about the important points raised in the material



What Review Materials Should I Buy?

- Check with your friends and coworkers to find out what they used and borrow as many books from them as you can
- Check your local university library about borrowing possibilities
- If you cannot find preparation materials to borrow, purchase them in order to solve practice problems



Should I Take a Review Course?

- Do I find it difficult to plan and organize complex projects?
- Will I be able to stick to my review plan if I do not have a course instructor assigning problems?
- Do I have the funds available to take a review course?
- How do I find a good review course?



Should I Take a Practice Examination?

- Taking a practice examination will help you determine whether you have chosen the correct reference books to take to the examination
- By taking a practice examination you can:
 - Learn how to manage your time during the examination
 - Identify areas for which you need more preparation
 - Reduce your anxiety during the real examination
- There are **FREE** practice exams on the ASQ Web site!



Practice Exams

- Take a practice examination at least 2 weeks prior to the examination date
 - Make sure you take a practice examination under conditions similar to a real examination
- Take a practice examination at the beginning of your review to help you plan your studying **ONLY** if you are certain that you are well versed in the BOK for your certification examination
 - Poor performance on a practice examination can be demoralizing
 - Poor performance can also lead you to study topics to improve your performance on the practice examination rather than focusing on the BOK



How Many Books Should I Take?

- Bring the main reference books you used to review topics and solve problems during your review for the examination. Typically, this means bringing 5 to 10 books
 - Place bookmarks at important pages
 - Keep a list on the inside front cover of pages containing important tables, etc.



Can I Take Self-developed Materials?

- As you prepare for the examination, create your own reference book using a three-ring binder
- Use separators with tabs for each topic
- Remember that no collections of questions and answers or review course quizzes are permitted



How Do I Get Ready During the Week Before the Examination?

- Make sure you can find the examination site
 - Know the route you are going to drive, where you are going to park, and where the building and examination room are located
- Fill the gas tank in your car on the day before the examination
- Obtain enough cash to pay for parking, snacks, etc.
- Pack your reference books, pencils, eraser, watch, calculator and extra batteries, and other supplies the day before the examination



How Do I Get Ready on the Day of the Examination?

- Set your alarm allowing enough time to get to the examination without worrying; then add 30 to 45 minutes
- Psych yourself up — be confident!
- Eat something light to give you energy and to prevent an empty stomach from annoying you and those around you
- Glance over your notes
- Drive to the examination site
- Relax at the site immediately before the examination, perhaps reading the newspaper and sipping a cup of coffee
- Avoid conversations about the subject matter — they can throw you off balance
- Don't review during the last hour before the examination; relax



More Exam-day Advice

- Get to the examination room early enough to:
 - Get a good seat
 - Make sure the clock is in view
 - Make sure the lighting is okay
 - Ensure that distracting friends are not sitting near you
 - Relax for a minute before starting; practice slow, deep breathing
- Manage your examination anxiety
 - It is natural — accept it
 - Some anxiety is good for motivation



More Exam-day Advice (cont'd.)

- If you have too much anxiety, take your mind off self-defeating thoughts before the examination begins:
 - Picture your summary notes and rehearse key concepts and terms in your mind's eye
 - Think briefly about the relaxed aftermath
 - Take several slow, deep breaths and concentrate on relaxing your whole body



Taking a Multiple-choice Exam

- Survey the examination
- Glance at all the pages
- Are you missing any pages? Tell the proctor!
- At the top of a sheet of paper, write the halfway time and the halfway question number
- Read the directions carefully
- Ask the proctor for clarification if you find the directions unclear



Taking a Multiple-choice Exam

- Answer easy questions first
 - You will not miss any easy questions by running out of time
 - It builds confidence
 - Later easy questions sometimes help answer earlier hard ones
 - You may spontaneously remember answers to hard questions later on
- Skip difficult questions and mark them for return with an "X" in the margin of the test booklet
- Answer questions that you are somewhat sure about (but not completely sure) and mark them with a "?" in the margin of the test booklet



Taking a Multiple-choice Exam (cont'd)

- Follow these guidelines for answering questions:
 - Cross out both negatives of a double negative
 - Underline dogmatic terms
Statements containing them are usually false because few things in the world meet the requirements of "always, never, best, etc."
 - If the statement contains "and," both clauses have to be true for the statement to be true
 - If the statement contains "or," only one clause has to be true for the statement to be true
 - Try to recall the answers before reading the choices
 - As you are reading the choices, circle the letter of the choices that seem to be the best
 - Read all the choices
 - Select the best choice. If two or more choices seem correct, choose the most specific one. For example, "A triangle has three sides" is better than "A triangle has more than two sides"



Taking a Multiple-choice Exam (cont'd)

- Do not pay attention to how many "As," "Bs," "Cs," or "Ds" you have marked
- Use all the time allowed
- Make sure that:
 - All questions are answered (since there is no penalty for guessing)
 - All choices are clearly marked
 - Answer sheet numbers correspond to examination question numbers
- Rework all the questions if you have time
 - First, work on unanswered questions marked with an "X"
 - Second, rework questions marked with a "?"
 - Third, rework the rest of the questions



After the Test?

- Treat yourself to a nice lunch or dinner
- Later that day, complete the sentence:
“Changes I will make to improve my results on the next examination are ...”
 - List three specific changes you will make in preparing for the next examination (including how and when you will make those changes)



Conclusions

- Planning and preparation are the keys to passing a certification examination



Questions?

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