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OCP Oracle9i

SQL 考试指南 (英文版)

OCP Introduction to Oracle9i: SQL Exam Guide

(美) Jason S. Couchman 著



机械工业出版社
China Machine Press



Education

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To the victims of the September 11, 2001 terrorist attack

About the Author

Jason S. Couchman is a database consultant and the author of *Oracle8i Certified Professional DBA Certification Exam Guide*, also from Oracle Press. He is a regular presenter on Oracle and OCP at international Oracle user conferences and meetings. His work has been published by *Oracle Magazine*, Harvard Business School Publishing, and Gannett newspapers, among others.

OracleCertified Professional

About the Oracle Certification Exams

The expertise of Oracle database administrators (DBAs) is integral to the success of today's increasingly complex system environments. The best DBAs operate primarily behind the scenes, looking for ways to fine-tune day-to-day performance to prevent unscheduled crises and hours of expensive downtime. They know they stand between optimal performance and a crisis that could bring a company to a standstill. The Oracle Certified Database Administrator Track provides DBAs with tangible evidence of their skills with the Oracle database.

The Oracle Certified Professional (OCP) Program was developed by Oracle to recognize technical professionals who can demonstrate the depth of knowledge and hands-on skills required to maximize Oracle's core products according to a rigorous standard established by Oracle. By earning professional certification, you can translate the impressive knowledge and skill you have worked so hard to accumulate into a tangible credential that can lead to greater job security or more challenging, better-paying opportunities.

Oracle Certified Professionals are eligible to receive use of the Oracle Certified Professional logo and a certificate for framing.

Requirements for Certification

To become an Oracle Certified Database Administrator for the Oracle9i track, you must pass four tests. These exams cover knowledge of the essential aspects of the SQL language, Oracle administration, backup and recovery, and performance tuning of systems. The certification process requires that you pass the following four exams:

- Exam 1: Introduction to Oracle9i: SQL (1Z0-007)
- Exam 2: Oracle9i Database: Fundamentals I (1Z0-031)
- Exam 3: Oracle9i Database: Fundamentals II (1Z0-032)
- Exam 4: Oracle9i Database: Performance Tuning (1Z0-033)

If you fail a test, you must wait at least 30 days before you retake that exam. You may attempt a particular test up to three times in a twelve-month period.

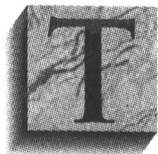
Recertification

Oracle announces the requirements for upgrading your certification based on the release of new products and upgrades. Oracle will give six months' notice announcing when an exam version is expiring.

Exam Format

The computer-based exams are multiple-choice tests, consisting of 50–65 questions that must be completed in 90–120 minutes.

Acknowledgments



here are many people I would like to thank for their help with writing this book. My first and most heartfelt thanks go to the dedicated readers of my other books who took time out of their busy schedules to send feedback on the book. I have listened to your praise and constructive criticism, and made every effort to correct and amplify my work based on the points you made. Please keep the email coming—it is by far the most effective way to make the book better!

Next, a note of gratitude to the folks at Oracle who made the book possible. Ulrike Schwinn has been a loyal associate, colleague, and friend during my ongoing effort to help 110,000-plus readers get Oracle certified. Thanks also to Oracle University for its feedback and assistance with the overall direction for the OCP DBA track. As always, thanks to the fine folks at Osborne—Scott Rogers, Lisa McClain, Jeremy Judson, and Athena Honore.

This book is dedicated to the memory of countless thousands of people who lost their lives in the tragic and senseless terrorist acts that took place on September 11, 2001. My heartfelt condolences go out to the families and friends of those victims, and my gratitude and thanks also to those hardworking firefighters, police, military, medical, and other personnel who provided relief for their suffering.

Preface



My interest in Oracle certification began in 1996 when I read about the Oracle DBA certificate offered by the Chauncey Group. I found it difficult to prepare for that certification exam for two reasons. First, there was an absence of practice questions readily available. Second, preparation for the exam involved reviewing six or seven different manuals and Oracle Press books, none of which were particularly suited to the task. Judging from the response to the proliferation of titles now available in the OCP Exam Guide Series from Oracle Press, it would seem others have had similar experiences.

This book is divided into two units, the first containing preparatory material for the Oracle9i Introduction to SQL exam part of the Oracle9i DBA certification track. The first unit has eight chapters, each containing several discussions that focus on a particular topic or subtopic objective listed by the *Oracle Certified Professional Oracle9i DBA Track Candidate Guide* for the Introduction to SQL exam. (For a complete listing of all the topics tested for this exam, check Chapter 1.) These discussions are followed by a “For Review” section, each listing the three or four most important concepts for you to retain from the discussion. After the review, you’ll see two to six exercise questions in exam-based multiple-choice or short-answer format. Following the questions you will find an answer key for those questions, which should help you master the material even more quickly. Thus, with this book you’re never more than a few pages away from demonstrating what you’ve learned about Oracle SQL for the OCP exam.

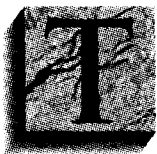
At the end of each chapter, you will find a short summary of what was covered in the chapter, followed by a Two-Minute Drill. The Two-Minute Drill contains another bulleted list of fast facts to review, or crib notes for the days leading up to your OCP exam. The chapters conclude with 5 to 20 short-answer and exam-based multiple-choice questions designed to help you further test your understanding of the materials you learned in the chapter.

The second unit consists of one chapter containing three full-length practice exams. Each test contains exam-based multiple-choice and scenario-based questions that are designed to help you strengthen your test-taking skills for the OCP exams. You will also find answers and in-depth explanations for the questions in the back of the chapter, along with a reference back to the exam topic and subtopic objectives from the *OCP Candidate Guide*. This feature should help you determine with pinpoint accuracy the areas in which you need further improvement.

Finally, a note about updates and errata: Because OCP covers such vast ground in a short time, this has become a living text. If you feel you have encountered difficulties due to errors, you can either check out www.exampilot.com to find the latest errata, or send me an email directly at jcouchman@mindspring.com.

Good luck!

Introduction



The Oracle Certified Professional DBA certification exam series from Oracle Corporation is a great opportunity for you to demonstrate your expertise on the use of Oracle database software. Called OCP, the exam series represents the culmination of many peoples' requests for objective standards in Oracle database administration, one of the hottest markets in the software field. The presence of OCP on the market indicates an important reality about Oracle as a career path. Oracle is mature, robust, and stable for enterprise-wide information management. However, corporations facing a severe shortage of qualified Oracle professionals need a measurement for Oracle expertise.

The OCP certification core track for database administrators (DBAs) consists of four tests in the following areas of Oracle9i: Structured Query Language (SQL), database administration fundamentals I and II, and tuning, with the current content of those exams covering Oracle through Oracle9i. As of this printing, each test consists of about 60 multiple-choice questions pertaining to the recommended usage of Oracle databases. You have about 90 minutes to take each exam. Obtaining certification for Oracle9i through the core track is contingent on taking and passing *all* core examinations. This book will help you prepare for the first exam in the DBA track.

Why Get Certified?

If you are already an Oracle professional, you may wonder, "Why should I get certified?" Perhaps you have a successful career as an Oracle DBA or developer, enjoying the instant prestige your resume gets with that one magic word on it. With market forces currently in your favor, you're right to wonder. But, although no one is saying you don't know Oracle when you put the magic word on your resume, can you prove how well you *do* know Oracle without undergoing a technical interview? I started asking myself that question when Oracle certification began to emerge. I was surprised to find out that after years of using Oracle, developing Oracle applications, and administering Oracle databases for Fortune 500 companies, there were a lot of things about Oracle I *didn't* know. And the only reason I know them now is because I took the time and effort to become certified.

If you're looking for another reason to become certified in Oracle, consider the computer professionals with Novell NetWare experience in the late 1980s and early 1990s. Back then, it seemed that anyone with even a little experience in Novell could count on a fantastic job offer. Then Novell introduced its Certified NetWare Engineer/Certified NetWare Administrator (CNE/CNA) programs. At first, employers were okay with hiring Novell professionals whether they had a certificate or not. As time went on, however, employers no longer asked for computer professionals with Novell NetWare *experience*; they asked for CNEs and CNAs. A similar phenomenon can be seen in the arena of Microsoft Windows NT, where the Microsoft Certified Systems Engineer (MCSE) exam has already become the standard by which those professionals are measuring their skills. Furthermore, with the latest economic downturn in the technology-driven U.S. economy comes the possibility of involuntary IT job changes. If you want to stay competitive in the field of Oracle database administration or development through those changes, your real question shouldn't be *whether* you should become certified, but *when*.

If you are not in the field of Oracle development or database management, or if you want to advance your career using Oracle products, there has never been a better time to do so. OCP is already altering the playing field for DBAs and developers by changing the focus of the Oracle skill set from "How many years have you used it?" to "Do you know *how* to use it?" That shift benefits organizations using Oracle as much as it benefits the professionals who use Oracle because the emphasis is on *skills*, not attrition.

Managers who are faced with the task of hiring Oracle professionals can breathe a sigh of relief with the debut of OCP as well. By seeking professionals who are certified, managers can spend less time trying to determine if the candidate possesses the Oracle skills for the job, and more time assessing the candidate's work habits and compatibility with the team.

**TIP**

You can find the exam objectives of the OCP exam on SQL at the beginning of Chapter 1.

How Should You Prepare for the Exam?

If you spend your free time studying things like the maximum number of nested subqueries permitted in SQL, you are probably ready to take the OCP Oracle9i SQL exam now. For the rest of us, Oracle and other companies offer classroom- and computer-based training options to learn Oracle. Now users have another option—this book! By selecting this book, you demonstrate two excellent characteristics: that you are committed to a superior career using Oracle products, and that you care about preparing for the exam correctly and thoroughly. And by the way, the maximum number of subqueries permitted in SQL is 255, and it is on the OCP Oracle9i SQL exam. That fact, along with thousands of others, is covered extensively in this book to help you prepare for, and pass, the OCP Oracle9i SQL exam.

DBA Certification Past and Present

Oracle certification started in the mid-1990s with the involvement of the Chauncey Group International, a division of the Educational Testing Service. With the help of many Oracle DBAs, Chauncey put together an objective, fact-based, and scenario-based examination on Oracle database administration. This test did an excellent job of measuring knowledge of Oracle7, versions 7.0 to 7.2. Consisting of 60 questions, Chauncey's exam covered several different topic areas, including backup and recovery, security, administration, and performance tuning, all in one test.

Oracle Corporation has taken DBA certification ahead with the advent of OCP. Their certification examination is actually five tests, each consisting of about 60 questions. By quintupling the number of questions you must answer, Oracle requires that you have an unprecedented depth of knowledge in Oracle database administration. Oracle has also committed to including scenario-based questions on the OCP examinations, and preparation material for these new questions is included in this book as well. Scenario-based questions require you to not only know the facts about Oracle, but also understand how to apply those facts in real-life situations.

Oracle's final contribution to the area of Oracle certification is a commitment to reviewing and updating the material presented in the certification exams. Oracle-certified DBAs will be required to maintain their certification by retaking the certification exams periodically—meaning that those who certify will stay on the cutting edge of the Oracle database better than those who do not.

The Next Steps

Next, we'll cover the test interface you will encounter on exam day. Figure I-1 contains a diagram of the actual test graphical user interface (GUI). Let's delve into an explanation of the interface. The top of the interface tells you how much time has elapsed and the number of questions you have answered. You can use the checkbox in the upper left-hand corner of the interface to mark questions you would like to review later. In the main window of the interface you'll find the actual exam question, along with the choices. Generally, the interface enables the user to select only one answer (unless the question specifically directs you to select more answers). In this case, the interface will enable you to select only as many answers as the question requests. After answering a question, or marking the question for later review, the candidate can move onto the next question by clicking the appropriate button in the lower left-hand corner. To return to the previous question on the OCP exam, hit the next button over to the left. You can exit your exam at any time by pressing the exit button on the bottom right-hand side. The final point feature to cover is the exhibit button. In some cases, you may require the use of an exhibit to answer a question. If the question does not require the use of an exhibit, the button will be grayed out. An exhibit can take the form of a graphic, table listing, or some other meaningful piece of information from the Oracle database you must use as the basis for answering the question.

When you've completed all questions on the exam, the Sylvan Prometric interface will display a listing of all the answers you selected, shown in Figure I-2. The questions you marked for later review will be highlighted, and the interface will guide you through a review of all those questions you marked. You can review individual questions or simply have Sylvan Prometric grade your exam.

The assessment test indicates your performance by means of a grade window, such as the one displayed in Figure I-3. It details the number of questions you answered correctly, along with your percentage score based on 100 percent. You will be shown a section-by-section breakdown of how you did according to the topics covered on the exam as published in the *OCP DBA Candidate Guide* from Oracle. Finally, a bar graph indicates where your performance falls in comparison to the maximum score possible on the exam. The OCP exam reports your score immediately after you exit the exam, so you will know right then whether you passed or not in a similar fashion as the assessment test. Both interfaces offer you the ability to print a report of your score.

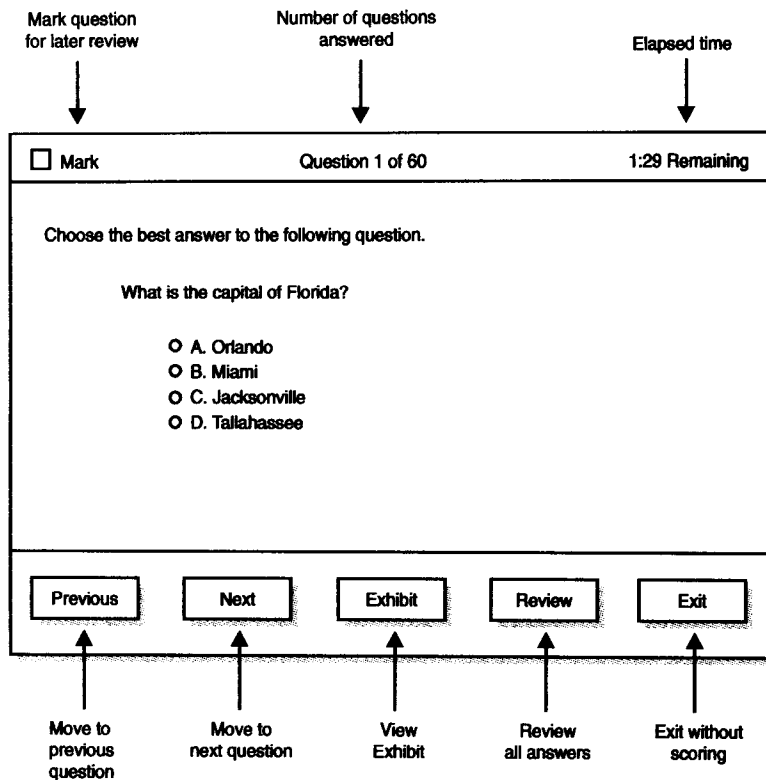


FIGURE I-1. *Sylvan Prometric exam interface illustration*

Strategies for Improving Your Score

When OCP exams were first released, the score range for each OCP exam was between 200 and 800. However, Oracle has vacillated on whether to scale the OCP exam score and has experimented lately with reporting only a raw score of the number of questions you answered correctly. However, the bottom line is still the same. Because an OCP exam typically contains 60 questions, you want to make sure you get at least 75 percent, or 45 of the questions right, in order to pass. Given the recent use of questions with two or even three correct answers on OCP exams, you need to be careful to select *all* correct answer choices on a question or you may not get full credit for a correct answer. *There is no penalty for wrong answers.*

The rest of this section covers some preliminary items for taking the OCP exams. The first tip is, *don't wait until you're the world's foremost authority on Oracle to take the OCP exam.* If your OCP exam is scaled as it was when the exams were first

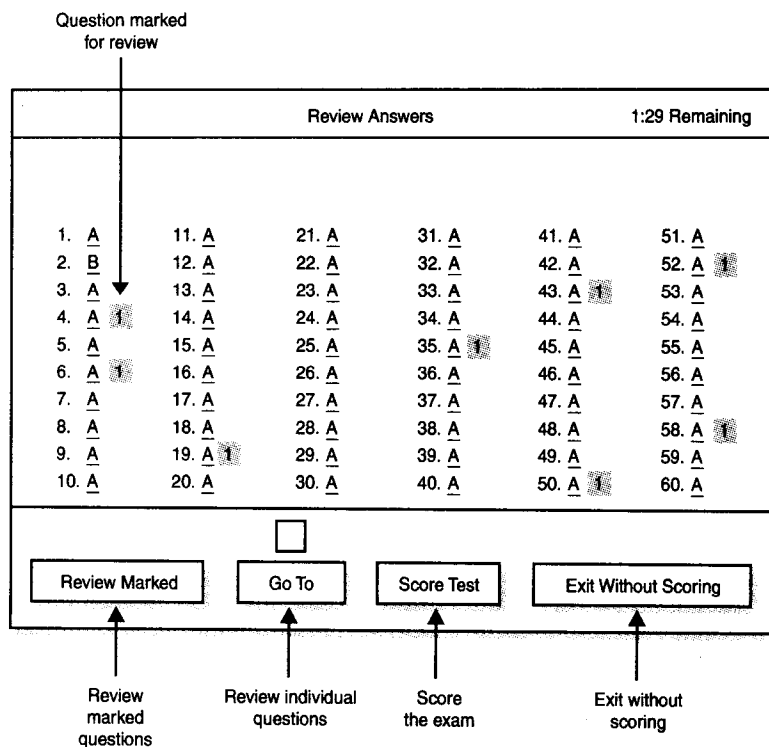


FIGURE I-2. Sylvan Prometric answer interface illustration

released, the passing score for most exams is approximately 650. You have to get 45 to 50 questions right, or about 75 to 80 percent of the exam. So, if you are getting about four questions right out of five on the assessment test or in the chapters (more on chapter format in a minute), you should consider taking the OCP exam. Remember, you're certified if you pass with 77 or 96 percent of the correct answers.

The second tip is, *if you can't answer the question within 30 seconds, mark it with the checkbox in the upper left-hand corner of the OCP interface for review later.* The most significant difference between the OCP interface and the assessment test interface is a special screen appearing after you answer all the questions. This screen displays all your answers, along with a special indicator next to the questions you marked for review. This screen also offers a button for you to click in order to review the questions you marked. You should use this feature extensively. If you spend only 30 seconds answering each question in your first pass on the exam, you will have at least an hour to review the questions you're unsure of, with the added bonus of knowing you answered all the questions that were easiest to you first.

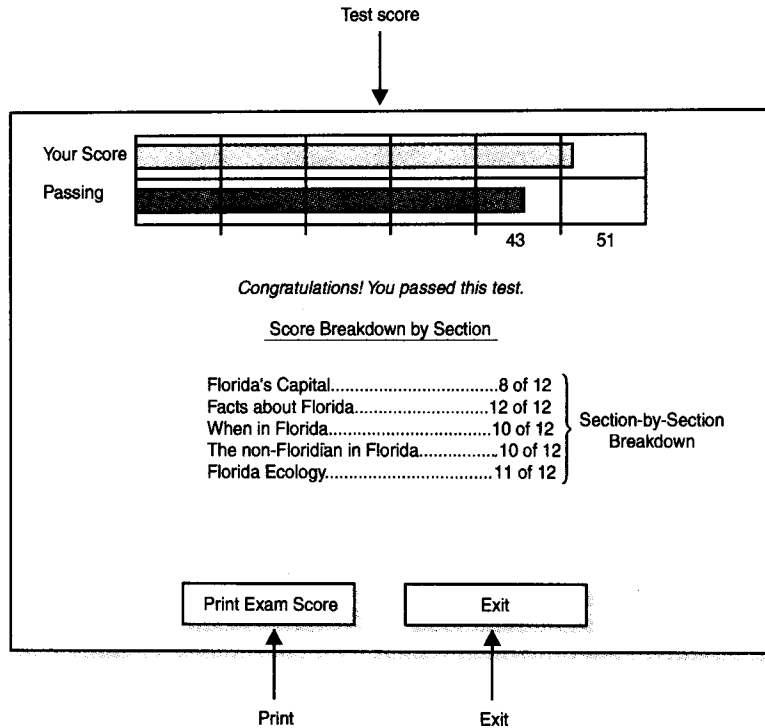


FIGURE I-3. *Sylvan Prometric score interface illustration*

Third, as stated previously, *there is no penalty for guessing*. If you answer the question correctly, your score goes up; if not, your score does not change. If you can eliminate any choices on a question, you should take the chance in the interest of improving your score. In some questions, the OCP exam requires you to specify two or even three choices. This can work in your favor, meaning you need to eliminate fewer choices to get the question right.

OCP for the Experienced DBA

Here are some tailor-made notes on taking OCP exams for users with specific levels of expertise:

- **Advanced (three to five years of continuous Oracle DBA experience)**
Take the database administration exam first, and then take the exams in any order you want. This is especially recommended for readers who are more experienced with database administration because chances are, you will do

well on the matters tested in that exam. Many test takers go for OCP Exam 1 on SQL, thinking it is the easiest exam. This is a trap. OCP Exam 1 asks many questions that may challenge your understanding of obscure single-row functions or the complex use of PL/SQL, and I believe for this reason that OCP Exam 1 is a “weeder” exam.

- **Intermediate (one to three years of continuous Oracle DBA experience)**
As with advanced-level DBAs, you may benefit from taking the database administration exam first to get a success under your belt. Then take OCP Exam 1 after you’ve had the chance to review the chapters covering that exam in this book.
- **Beginner (less than one year of continuous Oracle DBA experience)** Take the exams in sequential order, as listed previously, because each subsequent chapter of this *Guide* builds on information presented in the previous chapters. As such, you should read the *Guide* from beginning to end, and take the tests accordingly. Taking the exams in this manner will maximize your use of the *Guide* and your results on the tests. Also, stay in your current job until you have 12 to 18 months of experience. The combination of OCP plus experience will prove a winning combination as you hunt for a better career opportunity.
- **No experience with Oracle** Begin your exposure to the world of Oracle with another book, such as *Oracle: A Beginner’s Guide* by Corey and Abbey, also from Oracle Press. Then use this book to prepare for taking the exams in sequential order as listed previously because each subsequent chapter of this *Guide* builds on information presented in the previous chapters. As such, you should read the *Guide* from beginning to end and take the tests accordingly. Taking the exams in this manner will maximize your use of the *Guide* and your results on the tests. However, don’t be surprised if your job search still takes awhile. Most employers want to see at least six months of experience plus certification. If you’re having trouble gaining experience, try sending me an email for some tailor-made advice.

A Note About Updates and Errata

If you have comments about the book or would like to contact me about it, please do so by email at jcouchman@mindspring.com. You can also find related information such as posted updates, corrections, and amplifications at www.exampilot.com. Check back on this site and email me often, as new issues arise all the time in the pursuit of OCP. Plus, I love hearing about OCP success stories—especially yours!