

This handbook provides important information for persons planning to take the Bone Densitometry Equipment Operator (BDEO) examination for purposes of state credentialing.

EXAMINATION HANDBOOK

*For State Licensing Exams
Administered by ARRT in*

2009

*For Bone Densitometry
Equipment Operator*

Policies, procedures, and information in this handbook supersede previous editions. Please review this information carefully. Direct questions and/or correspondence to the state agency with which you applied for licensing.

Important Notice: State Licensing is Not ARRT Credentialing

The American Registry of Radiologic Technologists® does not certify individuals based upon the results of the Bone Densitometry Equipment Operator Examination. ARRT administers this examination program solely for use by state agencies. If you are interested in national certification in bone densitometry or other disciplines, consult the www.arrt.org website or phone ARRT at (651) 687-0048.

How to Use This Handbook

This *Examination Handbook* is designed to help state licensing candidates understand and prepare for the examination. To ensure that your exam experience is as successful as possible, you will want to read the following information very carefully and keep the handbook for future reference.

In these pages, you will find...

- Step-by-step instructions on scheduling your exam.
- Tips on the exam format.
- Test center requirements and procedures.
- Information on what happens after you complete the exam.

*** ARRT does NOT provide study materials for any certification or state licensing exams.**

While ARRT administers licensing exams for state licensing agencies, state licensing is *not* ARRT credentialing.

The information in this handbook supersedes that in any prior publications of the ARRT. Earlier versions may contain outdated information. It is the candidate's responsibility to obtain a handbook corresponding to the year in which the examination is to be taken, as noted on the front cover of the handbook.

Watch for These Symbols



This exclamation point is your pointer to key pieces of information you need to know.



This icon tips you to ways you can streamline your journey through the examination process.

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Visit our website at www.arrt.org

2009 Examination Handbook for Bone Densitometry Equipment Operator

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State Licensing vs. ARRT Credentialing

State examinations for radiologic technologist licensing are administered by The American Registry of Radiologic Technologists®, but state licensing is *not* ARRT credentialing.

Exam Fees

Fees paid to the ARRT are not refundable under any circumstances, nor can they be transferred to another category of examination.

State Licensing

More than three-quarters of the states have licensing laws covering the practice of radiologic technology. Although the ARRT certification examination is voluntary, many states use the ARRT scores in licensing decisions.

State licensing, in and of itself, is *not* ARRT credentialing. On the other hand, ARRT certification may not be sufficient for state licensing. Test scores earned as a state candidate may not be used for later application to ARRT for certification.

Application to take the examination for ARRT certification must be made directly to the ARRT. Under no circumstances does application to the state alone constitute application to the ARRT for certification. In general, the ARRT and the state follow separate application procedures. Individuals who are assigned an ID number beginning with a nine (9XXXXX) and whose Candidate Status Reports have violet print are scheduled for state BDEO examination only.

Administration of licensing laws differs from state to state. Some require that an application be submitted prior to the examination administration, while others require only examination results.

Direct any questions about licensing requirements to the individual state. ARRT is unable to respond to questions regarding licensing requirements of specific states. See Appendix F for a list of state licensing agencies.

ARRT Credentialing

Beyond its state licensing program, ARRT administers a national credentialing program across the spectrum of medical imaging, interventional procedures, and radiation therapy.

Eligibility for ARRT certification depends upon meeting criteria in three important areas: education, ethics, and examination.

For additional information, visit the www.arrt.org website or phone the ARRT office at (651) 687-0048.

Copyrighted Exam Material

Neither the licensing exams, their eligibility requirements, nor application processes contained in this handbook bear any relation in any way to national credentialing in radiologic technology offered by ARRT. Law prohibits any attempt to reproduce all or part of the examinations. Anyone caught removing exam materials from the test center, whether by physical removal or by reproducing materials from memory, will be prosecuted to the full extent of the law and will be permanently barred from future examinations.

Before the Examination

Schedule an appointment to test during your assigned window, at any of hundreds of test centers across the U.S.

Examination Window

You may schedule your exam appointment for any time during a set examination window. Generally, examination windows begin on the Wednesday after the application is processed and extend for 90 calendar days. For example, if an application is processed on Thursday, April 17, 2009, the examination window begins on Wednesday, April 22, 2009, and ends on Tuesday, July 21, 2009.

Test Centers

ARRT examinations are administered by Pearson VUE, the electronic testing business of Pearson Education. Their network of more than 200 high-security test centers is specifically designed and built for professional licensure and certification markets in the U.S. and its territories. Their international test centers are equipped to deliver ARRT exams in selected cities in Canada, Europe, Asia, and Australia.

A geographic list of test center locations appears in Appendix E of this handbook, but please keep in mind that location changes may occur after publication. Current test center locations and driving directions may be viewed over the Internet at www.pearsonvue.com/arrt. (ARRT's website at www.arrt.org will also link you to Pearson VUE.)

Candidate Status Report

ARRT will mail a Candidate Status Report (see Appendix B for sample) to you after your application is processed. The Candidate Status Report contains candidate identification information, the six-digit ARRT ID number, and examination window dates. Notify the state immediately — and before scheduling your appointment — if any identification information is incorrect. Please do not contact ARRT with identification changes.

Status Report Info Incorrect?

If the information on your Candidate Status Report is incorrect, contact your state licensing agency — not ARRT — right away, and before trying to schedule a testing appointment.

Upon verifying that the information on your Candidate Status Report is correct, you may proceed to schedule your exam appointment. The examination window shows the dates during which you may take the exam. After the window expires, the Candidate Status Report is no longer valid, and you forfeit your fee.

If you lose a Candidate Status Report or do not receive it within the anticipated processing time of four weeks, contact your state licensing agency.

Testing Accommodations: Ask Up Front

Requests for testing accommodations must be submitted to ARRT before scheduling an exam appointment with Pearson VUE.

Requesting Testing Accommodations

Any candidate who desires any deviation from standard procedures as outlined in this handbook must submit a *Request for ARRT Testing Accommodations*. This requirement applies to any disability accommodations as well as requests to use medical aids such as insulin pumps, pico magnifiers, lumbar pillows, asthma inhalers, etc.

ARRT complies with the Americans with Disabilities Act (ADA) and provides testing accommodations only when the ADA requirements are met. To be considered for testing accommodations, the candidate must submit a *Request for ARRT Testing Accommodations* to ARRT as soon as possible — and before scheduling an exam appointment. The request form can be found at [www.arrt.org / Examination / ADA](http://www.arrt.org/Examination/ADA); or you may phone (651) 687-0048, ext. 3155, for a copy.

(continued on next page)

In addition, the candidate must submit documentation verifying his or her functional impairment. Requests for testing accommodations will not be considered without this documentation. Guidelines on the required documentation may also be found at www.arrt.org / Examination / ADA; or you may phone (651) 687-0048, ext. 3155, for a copy.

The candidate must submit a request for testing accommodations each time a future examination application is submitted; the documentation is required only once. Candidates not submitting a request form with each future application will be processed for examination without testing accommodations.

Phone ARRT at (651) 687-0048, ext. 3155, if you are unable to download the information from the website or if you require further information on testing accommodations.

ARRT will release information regarding the granting or denial of accommodations only in writing directly to the candidate and will discuss all other candidate information with the candidate only.

Notify the State, Not ARRT

Exam candidates should notify the state — not ARRT — immediately of any name and/or address changes.

Address or Name Changes

Candidates must notify their state licensing agency immediately of any changes to their name or address as submitted on their application form. Changes cannot be processed by ARRT or the Pearson VUE call center or at the test center. At the test center, the name on a candidate's ID must match the name as it appears on the Candidate Status Report (the only permissible exception is middle initial versus middle name, as long as the first letters match).

Changing an Exam Window

If circumstances make it impossible for you to schedule an examination during the assigned window, you may request a new window. Direct requests to the state licensing agency for approval. If the state approves the change, it will contact ARRT to arrange a new window. ARRT processes window change requests only when they are received from the state licensing agency and not from the candidate.

TIP

Maximum of Three Changes

If approved by the state licensing agency, candidates are allowed a maximum of three window changes per exam application. If a third window change is allowed to expire, the individual forfeits the exam fee. To be considered for a new exam window, the individual has to make their request to the state licensing agency.

Candidates who have an existing appointment must cancel it before requesting a window change, scheduling a new exam date, or changing the test center location. (See "Canceling or Rescheduling Your Appointment" on page 8.)

ARRT must receive a written request from the state — not the candidate — for a new window on or before the last day of the current examination window. If the window expires on a weekend or holiday, the request must be received on or before the last business day prior to the expiration date. (Saturday and Sunday are not considered ARRT business days.) The candidate's new exam window will begin on the day ARRT processes the change request. ARRT will not accept requests for specific window dates.

ARRT cannot process requests it receives after the last day of a candidate's current window.

The Exam Appointment

Once you receive your Candidate Status Report from ARRT, you're ready to schedule the appointment.

Scheduling Your Appointment

Pearson VUE schedules appointments on a first-come, first-served basis. As soon as you receive your Candidate Status Report, you may schedule your appointment one of two ways:

- calling the Pearson VUE Call Center at the toll-free phone number shown on your Candidate Status Report (Monday–Friday, 7:00 a.m.–7:00 p.m. Central Time); or
- online at the www.pearsonvue.com/arrt website (see tip below for details).

[NOTE: To schedule an appointment from outside the U.S. or Canada, use the web site noted above or phone ARRT at (651) 687-0048, ext. 8560, to get a special scheduling phone number.]

Even if you don't want to test immediately, it's better to schedule early to obtain your desired appointment. Candidates who delay too long in scheduling the examination may not find an available appointment prior to the expiration date.

You will be providing and receiving a great deal of important information when scheduling your appointment with Pearson VUE. It is your responsibility to manage that information each step along the way.

TIP

Internet Scheduling: Two-Step Process, Brief Delay

Scheduling your exam appointment via the website www.pearsonvue.com/arrt is a two-step process that may involve a brief waiting period. If you want to avoid any delay, you should schedule by phone.

When you arrive at the Internet page, you will be asked for your ID number as well as personal information that is on your current CSR. Click "continue" at the bottom of each page. NOTE: You aren't finished until a "thank you" screen confirms that your request has been processed.

If you provided a valid e-mail address, you will receive your user name and password within one business day and may then proceed to schedule your appointment. (If you forget your login or password, you will need to phone the Pearson VUE call center to have a new login and password assigned.)

Have Your Information Available

Have your Candidate Status Report at hand when going online or calling to schedule. You cannot schedule a testing appointment until you receive your Candidate Status Report. You will be able to select a test center from those in Appendix E or on the Pearson VUE website.

When calling to schedule an appointment, you will be asked to verify your name, address, and other identifying information and to provide your ID number and exam name from the Candidate Status Report. Calls may be recorded for quality assurance purposes.

NOTE: Call Center staff cannot make changes (except adding e-mail and phone info) to the application information you provided to the state and to ARRT. Resolve any discrepancies in name or address with the state licensing agency before you schedule your appointment.

Pearson VUE Call Center staff will help you schedule a date and time for testing. Test centers are generally open Monday through Friday between the hours of 8:00 a.m. and 6:00 p.m. Some test centers offer extended evening or Saturday hours.

Confirm Your Scheduling Information

Space is provided on the back of the Candidate Status Report for you to write the date, time, confirmation number, testing appointment location, and name of the Call Center representative. Pearson VUE will e-mail or send by U.S. Postal Service (your preference) a letter confirming the appointment. The letter will include the address, phone number, and directions to the test center, as well as the name, date, and time of your exam and other important information. Driving directions are also available at www.pearsonvue.com.

(continued on next page)

Follow-Up and Confirm Your

Exam Appointment

Candidates are responsible for confirming the date, time, and location of the exam with Pearson VUE. Those who don't receive a confirmation within five days of scheduling should contact the Pearson VUE call center to confirm over the phone and request that a duplicate confirmation letter be sent. If your appointment is scheduled for less than five days out, call Pearson VUE for confirmation the day after you make the appointment.

This applies to appointments scheduled via the call center as well as those scheduled through the Internet.

Candidates are responsible for confirming the date, time, and location of the exam with Pearson VUE. Those who don't receive a confirmation within five days of scheduling should contact the Pearson VUE call center to confirm over the phone and request that a duplicate confirmation letter be mailed. If your appointment is scheduled for less than five days out, call Pearson VUE for confirmation the day after you make the appointment.

Neither ARRT nor your state licensing agency are able to confirm testing dates, times, or locations before the examination, nor can they provide driving directions to test centers.

Missing Your Appointment

Candidates who fail to keep an appointment or to reschedule it as detailed in the next section are required to forfeit their examination fees. Neither ARRT nor your state licensing agency are responsible for appointment time discrepancies between you and the test center.

Canceling or Rescheduling Your Appointment

You may cancel or reschedule an appointment up to 24 hours (one business day) prior to the scheduled appointment — either by phoning 1-800-632-9055 (leaving a message on an answering machine is not acceptable) or at the www.pearsonvue.com/arrt website (be sure to follow the prompts to complete the process). If you make a new appointment, follow up by phoning the Pearson VUE call center to confirm it.

The table below shows that appointments for a given time on the scheduled test day must be canceled by that same time on the preceding business day:

| Scheduled Test Day | Cancel/Change Deadline (same time as appointment) |
|---------------------------|--|
| Monday | Friday of the preceding week |
| Tuesday | Monday of the same week |
| Wednesday | Tuesday of the same week |
| Thursday | Wednesday of the same week |
| Friday | Thursday of the same week |
| Saturday | Friday of the same week |

For example, if someone is scheduled to test at 9:00 a.m. on Monday, he or she must call by 9:00 a.m. on Friday to cancel the appointment.

Candidates failing to appear for a scheduled appointment and not rescheduling through the procedure above will forfeit their examination fee. To reschedule, they must contact the state licensing agency. Neither ARRT, nor your state licensing agency, nor Pearson VUE are responsible for candidate appointment errors.

TIP

Calling to Reschedule? Remember to Cancel

Just because a candidate calls to reschedule a testing appointment doesn't necessarily mean that the initial appointment is automatically canceled. And an uncanceled appointment is the candidate's responsibility, potentially resulting in forfeiting the application fee.

If you call Pearson VUE intending to reschedule a testing appointment, your initial appointment will remain in effect until you formally approve a new appointment date/time. If you can't find an appropriate alternative appointment and plan to call back later, your initial appointment will still be on the books.

Play it safe when changing your appointment. Be sure to specifically request that the initial appointment is canceled. The next day, call Pearson VUE to confirm that the appointment was canceled.

Exam Administration Day

Here's a preview of what you'll encounter when you open the test center's front door on the day of your BDEO exam appointment.

Exam Content

ARRT designs examinations in collaboration with consultants from various specialties. The exams consist of questions designed to measure the knowledge and cognitive skills underlying the intelligent performance of the major tasks typically required in radiologic technology.

Content specifications and numbers of questions are included in this book as Appendix A. (Also see section on "Exam Timing" on page 11.)

ARRT doesn't provide specific lists of study materials or textbooks because the exams are built using many references. ARRT neither recommends nor endorses any review programs, mock registries, or study guides for any of its examinations.

ARRT owns the copyright for the examinations. Law prohibits any attempt to reproduce all or part of the examinations. Anyone caught removing exam materials from the test center, whether by physical removal or by reproducing materials from memory, will be prosecuted to the full extent of the law and will be permanently barred from future examinations.

Test Center Environment

Pearson VUE test centers provide computerized testing for many organizations. Be aware that other tests may be administered in the test center at the same time as ARRT examinations.

Test center personnel try to maintain a comfortable temperature in the testing rooms. In spite of these efforts, the room may be too cool or too warm for an individual's preference. Dress accordingly.

Keep in mind that there may be other examinees who are required to type essay questions. If you feel this typing may be disruptive to your testing, please be sure to request ear-plugs before beginning your exam.

Follow Procedures

Test center personnel adhere to designated procedures to ensure that their operations meet ARRT criteria for standardized testing. Review the following information before the examination to become familiar with the procedures.

Arrive Early

Having already confirmed the location of the test center, plan your schedule and route to ensure that you arrive at least 15 minutes before the scheduled appointment, to allow time for check-in procedures. Be sure to allow ample time for your commute, especially if inclement weather is a factor.

If a candidate arrives at the test center 15 minutes after the scheduled appointment, he or she may be required to forfeit the appointment. If an appointment is forfeited, the test center will report to ARRT the candidate's failure to take the examination. ARRT does not refund examination fees on forfeited appointments.

ID, Photo, Signature, Fingerprint

When you arrive at the test center, you will be required to show two forms of identification, both of which show your pre-printed name and signature. One of the IDs must be a current official government-issued photo ID. See the box at the bottom of this page for examples of the two types of ID required.

TIP

Invalid ID? Cancel Appointment

If you arrive at the test center without valid forms of ID, you will not be admitted to the test. (see box below for "Acceptable Forms of Identification.")

Cancel your appointment (no later than 24 hours in advance) and reschedule when you have acquired two forms of valid ID.

Candidates without proper ID will not be admitted to the test center. They will not be allowed to reschedule the testing appointment and will forfeit their testing fee. A candidate admitted with questionable ID may have his or her score canceled following investigation by the ARRT.

Your name on the government-issued ID must be the same as that on record with the ARRT, as reflected on your most recent Candidate Status Report. Your ID may contain your full middle name as long as the middle initial on your Candidate Status Report matches the first letter of your middle name.

Upon checking in, you will be asked to provide a digital signature and will be electronically fingerprinted and photographed. If you leave the testing area for any reason, you will be electronically fingerprinted upon leaving and again before re-entering. These processes are for identification purposes only. The information is kept confidential and not shared with any organization.

Assignment to Testing Station

Test center personnel will give you a short orientation and then escort you to an assigned workstation. All candidates must remain in their assigned seats during the examination, except when authorized to leave by a test center staff member.

Test center personnel are not trained to answer specific questions related to ARRT examination programs.

TIP

Don't Bring Yours... Calculators Are Provided

Personal calculators aren't permitted, so don't even bring one to the test center. You can use theirs.

Notes and Calculators

Test center personnel will provide an erasable note board and pen, which may be replaced as needed during testing but may not be removed from the testing room at any time. Candidates are not allowed to take scratch paper or pencils into the testing room.

Both scientific and basic four-function calculators are provided on the computer, or candidates may request a basic four-function calculator from test center personnel. Appendix D presents facsimiles of the computer calculator. Personal calculators are not permitted.

Acceptable Forms of Identification

Primary

Must have **pre-printed name, photo and signature** and not be expired

- Government-issued driver's license
- State ID card
- Passport

Secondary

Must have **pre-printed name and signature** and not be expired

- Government-issued IDs (e.g., U.S. Social Security card)
- Employee ID or work badge
- Bank automatic-teller machine (ATM) card
- School ID
- Credit card
- Any form of ID on the primary list

Very Important! Please note that military IDs, Alien-Registration Cards ("Green Card") or any other IDs that do not have the candidate's signature **will not be accepted** at the test center as valid primary or secondary identification.

Requesting Assistance

Raise your hand to notify test center personnel if:

- you need assistance to adjust the computer screen's brightness or contrast
- you would like a hand-held calculator
- you need earplugs
- an image appears too large to be fully viewed
- you suspect a problem with the computer
- you need another erasable note board
- you need a break
- you need a staff member for any other reason.

Exam Timing

Time allowed for completing an examination is based on the number of questions.

The Bone Densitometry Equipment Operator Examination allocates 1.5 hours for answering test questions. Candidates have two hours in total, allowing 20 minutes for the tutorial before the exam and 10 minutes for the survey at the end of the exam.

This extra 30 minutes is for completion of the tutorial and survey and cannot be used to answer exam questions. ARRT recommends that you complete the tutorial to familiarize yourself with the testing program and the online calculators.

Voluntary breaks are subtracted from the allowed testing time; that is, the clock is not stopped during voluntary breaks.

Pilot Questions

Pilot questions are unscored questions embedded in the test. ARRT uses data from these pilot questions to evaluate new test questions. This is a cost-effective way to develop test materials for future candidates, just as past candidates assisted in piloting questions for today.

These questions are not identified as pilot questions, and they appear just like any other question on the test. Up to 20 percent of your test may be unscored pilot questions, and ARRT has allotted extra time for you to complete them. Your answers to these questions will not affect test scores.

Test Center Restrictions

Maintaining a standardized testing environment ensures that the exam results of all ARRT-assigned candidates are earned under comparable conditions and represent fair and accurate measurement.

All candidates must adhere to the following regulations:

- No reference material may be brought into the testing room.
- No papers, pamphlets, books, food, or purses are allowed in the testing room. Do not take large bags, textbooks, notebooks, etc., to the test center. You will be required to leave personal belongings in secure storage, but space is limited so plan accordingly. Test centers assume no responsibility for candidates' personal belongings.
- No unauthorized testing aids are permitted in the testing room. This includes calculators, pens, rulers, highlighter pens, stereos or radios with headphones, watch calculators, watch alarms (including those with flashing lights or alarm sounds), dictionaries, translators, personal digital assistants (PDAs), electronic devices, or keyboards. You may be asked to remove your watch and other jewelry that creates noise that may be distracting to other examinees in the room.
- Pagers and portable telephones are not allowed. If you bring them, they must remain in your assigned locker at all times for the duration of your exam.

(continued on next page)

TIP

Pace Yourself...

It's important to use your time economically. Time remaining is displayed in the upper right corner of the computer screen. If a question is difficult, guess at the answer, flag the question for review and go on to the next question. When you have finished the examination and there is still time left, go back to the questions that you flagged and review them. (See Appendix D for more information.)

- Candidates may not leave the test center to make telephone calls.
- Eating, drinking, or use of tobacco is not allowed in the testing room. You may keep snacks and water in your locker outside the testing room only.
- Waiting areas at the test centers are small. Friends, relatives, or children who accompany you to the test center will not be permitted to wait in the test center or to contact you during the examination.
- If you need to leave the testing room for personal reasons, you must first get test center staff's permission. No additional time is allowed to make up for time lost due to this reason. Checking notes or textbooks or with other individuals, in person or by phone, while out of the testing room is considered misconduct (see following section on "Misconduct").
- Any candidate who leaves the test center building may not return to continue the exam.

Misconduct

Numerous security measures are enforced during test administration to ensure the integrity of ARRT exams. Be aware that candidates will be observed at all times while taking the exam. This includes direct observation by test center staff, as well as video and audio recording of the testing session.

Any irregular behavior during or in connection with the examination — as evidenced by observation, statistical analysis of answers, or otherwise — will constitute grounds for ARRT to take appropriate punitive action. This includes permanently barring the candidate from all future examinations, terminating the candidate's participation in the exam, and invalidating the results of that exam and any prior exam. Furthermore, ARRT may decide to withhold scores or certificates, to revoke or suspend a certificate, to deny or reject any application for renewal of registration of a certificate, to censure, or to take any other appropriate action.

Individuals who engage in any of the following conduct will be dismissed from the test center and exam administration, and their test scores will be canceled. Examples of misconduct include, but are not limited to, the following:

- failing to provide acceptable identification
- making personal phone calls
- giving or receiving unauthorized help
- attempting to take the examination for someone else
- using notes, books, or other unauthorized aids
- bringing any materials to the test center that may compromise the exam administration
- eating or drinking during the test
- attempting to remove test questions (in any format) from the room
- failing to follow the test center staff's instructions or instructions presented by the computer
- using scratch paper
- tampering with the operation of the computer or attempting to use it for any function other than taking the examination
- creating a disturbance of any kind
- leaving the test center.

What if the Test Center is Closed?

If you are unsure whether a test center is closed because of inclement weather or some other factor, phone Pearson VUE's Call Center at 1-800-632-9055. If the test center is open, it is your responsibility to keep the appointment. If it is closed, you will be given the opportunity to reschedule the appointment.

In the event of a test center closing, Pearson VUE will try to contact all affected candidates to reschedule. Candidates may also call Pearson VUE to reschedule themselves.

What if the Computer Experiences Technical Difficulties?

On rare occasions, candidates may encounter technical difficulties at the test center. If you experience a technical difficulty, notify the test center administrator immediately. Test center personnel will make every effort to correct any difficulties as quickly as possible.

If you encounter technical difficulties that could impact your score, ensure before you leave the test center that the administrator files a report. You must alert ARRT within two business days so your score can be held until the situation has been resolved. ARRT will not investigate complaints it receives after test scores have been released.

Should the test center experience a loss of power, back-up systems are in place, so every reasonable effort will be made to retrieve testing data. Once power is restored, candidates will be able to continue their testing sessions from the point where they were interrupted.

If a candidate is unable to continue the testing session due to severe technical difficulties, reasonable accommodations will be made, including rescheduling of a testing appointment. ARRT will evaluate individual requests for rescheduling at no cost.

Taking the Exam

Order of Questions

ARRT examinations present questions in random order, which is consistent with the purposes of education and evaluation. When a student learns an important concept, the intent is that he or she will take that knowledge beyond a specific context or environment and generalize that knowledge to the practice setting.

Question Format

Most test items are standard multiple-choice with one best answer. ARRT is also introducing new formats on a limited basis. Some questions may require that you select multiple answers from a list or use the mouse to sort a list of options into a particular order. A few items may require that you identify anatomic structures on an image by placing the mouse arrow (cursor) over the correct location on the screen. Appendix D provides additional information on test question formats.

Selecting Answers

An answer must be recorded for a question before the computer allows display of the next question. You may flag questions for later review if you are unsure of the answer. For further information, refer to Appendix D.

(continued on next page)

TIP

Severe Weather Looming?

If you anticipate severe weather and your appointment is more than 24 hours out, consider re-scheduling to avoid transportation hassles.

Non-Disclosure Agreement

After the tutorial, a non-disclosure agreement will appear on the computer screen. Candidates must accept the terms of the agreement in order to proceed with the exam. By accepting these terms, candidates agree to not disclose exam questions in any form or remove them from the test center. You have two minutes to indicate your acceptance of the agreement.

The agreement states: "This exam is confidential and is protected by trade secret law. It is made available to you, the examinee, solely for the purpose of assessing qualifications in the discipline referenced in the title of this exam. You are expressly prohibited from disclosing, publishing, reproducing, or transmitting this exam, in whole or in part, in any form or by any means, verbal or written, electronic or mechanical, for any purpose, without the prior express written permission of ARRT."

The screen will instruct candidates to click the "A" (for Accept) button to symbolize their signatures and to accept the terms. Respond to this screen within two minutes. You must click "A" to continue with the exam. If you do not accept these terms, click the "N" (for Not Accept) button to end the exam and let test center staff know that you are through. If you click on "N" but later decide to examine at a future date, you will need to submit another fee.

Pacing

It's important to use your time economically. Time remaining is displayed in the upper right corner of the computer screen. If a question is difficult, guess at the answer, flag the question for review, and go on to the next question. When you have finished the examination and there is still time left, go back to the questions that you flagged and review them.

Guessing

Exam scores are based upon the total number of correct answers. Therefore, it is to the candidate's advantage to answer every question, even if that means selecting an answer of which he or she is not sure. Candidates must indicate some response to each question before the computer will proceed to the next question.

Candidate Comments

You may comment on a specific question at the time you answer the question by clicking on the "Comment" button at the top of that page. No additional testing time is allowed during the exam for making comments on questions.

You may comment on the test center in the evaluation survey at the end of the test.

Leaving the Test Center

When you are finished with the examination and evaluation survey, test center staff will collect the erasable note board before dismissing you. Candidates may not remove note boards from the testing room. You will be electronically fingerprinted again before leaving the test center.

Non-Attendance

If a candidate fails to appear for examination as assigned, and a new window has not been authorized, the candidate's file is closed.

Appeals of Test Administration Procedures

ARRT makes every effort to assure that examinations are fairly administered in a comfortable and safe environment. Candidates who believe that an examination was administered in a manner that substantially deviated from normal testing procedures may request a review of procedures.

If you experience a problem, verify with the test center administrator that they will file a report regarding your issue. If ARRT finds that any such deviation unfairly interfered with a candidate's ability to complete the exam to the best of his or her ability in the allotted time, the original score will be canceled and the candidate will be allowed to retake the examination at no cost.

Under no circumstances will a candidate's score be adjusted based upon the findings of the review.

Candidates who wish to request a review must submit the *Test Administration Appeal Form* available at www.arrt.org / **Examinations / Test Admin Appeal**, explaining in detail the specific nature of the alleged deviation from normal testing procedures. Letters to ARRT should indicate the examination discipline, administration date, and test center location. The letter must be faxed to (651) 687-0349 within two days of the date of test administration.

Candidates must notify ARRT in writing of any negative situations before scores are processed and released to the state. ARRT will not investigate complaints after the candidate's exam scores have been processed.

After the Examination

After the examination, all exam data is returned to ARRT, where scoring and analysis is completed. ARRT follows strict procedures to ensure accuracy of scoring.

Cancellation of Scores

ARRT may withhold or cancel scores if there is evidence that the security of the examination has been compromised. Such action may be necessary even in the absence of evidence indicating that a candidate was knowingly involved in the compromising activities. ARRT expects candidates to cooperate in any investigation.

Some scores may be rendered invalid because of circumstances beyond a candidate's control, such as faulty materials or mis-timing. ARRT investigates each of these situations. When this results in a cancellation of scores, ARRT arranges for a makeup administration of the exam at no additional cost.

Score Reporting

ARRT does not release scores to state candidates. Candidate score information is forwarded to the state licensing agencies which in turn mail score reports to state candidates. Contact your state licensing agency — *not* ARRT — if you have not received your scores within four weeks.

Appeals of Exam Scoring

The ARRT employs several quality control procedures to ensure that all examinations are scored with complete accuracy. However, candidates may request a review of the accuracy of the scoring process if they feel an error has occurred.

Candidates who wish a review of scoring must send a letter of request to the ARRT within 30 days of their exam date — detailing the specific reason a scoring error is suspected. Requests must be accompanied by a \$25 fee, payable to ARRT. The ARRT will review the candidate's responses to each question, compare those responses to the answer key, and recalculate raw scores. Passing scores are determined by the state.

ARRT will report its findings to the candidate within 30 days of receiving the written request. If ARRT finds evidence of any scoring error, it will cancel the original score and notify the state of the corrected score.

Re-examination

Candidates who fail the examination should contact their state licensing agency for information on re-examination.

Appendices

| | |
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Appendix A

CONTENT SPECIFICATIONS FOR THE BONE DENSITOMETRY EQUIPMENT OPERATOR EXAMINATION



Content Specifications Effective with the January 2003 Examination

The Bone Densitometry Equipment Operator Examination is made available to state licensing agencies to assess the knowledge and cognitive skills required to perform DXA scans of central and peripheral anatomical sites. These content specifications were derived from the ARRT Job Analysis Project for Bone Densitometry. The ARRT administers the examination to state approved candidates under contractual arrangement and provides the results directly to the state. This examination is not associated with any type of certification by the ARRT.

The major sections of the examination are outlined below. Subsequent pages describe in detail the topics covered within each major section.

| | Section | Number of Questions |
|----|----------------------------------|----------------------------|
| A. | Basic Concepts | 12 |
| B. | Equipment Operation & QC | 9 |
| C. | Radiation Safety | 9 |
| D. | DXA Scanning of Finger | 4 |
| E. | DXA Scanning of Heel (Os Calcis) | 4 |
| F. | DXA Scanning of Forearm | 6 |
| G. | DXA Scanning of Lumbar Spine | 8 |
| H. | DXA Scanning of Proximal Femur | <u>8</u> |
| | | 60* |

* An additional 20% of the test may be pilot questions.

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(Continued on next page)

A. BASIC CONCEPTS (12)

1. Osteoporosis

- a. World Health Organization (WHO) Definition and Diagnostic Criteria
- b. Primary vs. Secondary
- c. Type I (postmenopausal) vs. Type II (senile)
- d. Risk Factors
 - 1) controllable (smoking, calcium intake, estrogen, medications)
 - 2) uncontrollable (heredity, race, gender, age, medical conditions)

2. Bone Physiology

- a. Functions of Bone
 - 1) structural support & protection
 - 2) storage of essential minerals
- b. Types of Bone
 - 1) cortical bone
 - 2) trabecular bone
- c. Bone Remodeling Cycle
 - 1) resorption/formation
 - 2) osteoblasts/osteoclasts
- d. Bone Health
 - 1) nutrition
 - 2) exercise

3. BMD Testing Methods (anatomical sites scanned; key advantages and disadvantages)

- a. Dual-Energy X-ray Absorptiometry (DXA)
- b. Single X-ray Absorptiometry (SXA)
- c. Quantitative Ultrasound (QUS)
- d. Radiographic Absorptiometry (RA)

4. Measuring BMD

- a. Basic Statistical Concepts
 - 1) mean
 - 2) standard deviation
 - 3) coefficient of variation
- b. Reporting Patient Results
 - 1) BMD formula
 - 2) Z-score
 - 3) T-score

B. EQUIPMENT OPERATION & QC (9)

1. Computer Console

- a. Major Components
- b. File Management

2. Fundamentals of X-ray Production

- a. Properties of X-ray Beam
 - 1) quality (kVp)
 - 2) quantity (mA)
 - 3) duration/time (S)
- b. Filters and Collimators
- c. X-ray Energy Production
 - 1) single
 - 2) dual

3. Types of DXA Systems

- a. Pencil Beam Systems
- b. Fan Beam Systems
- c. Cone Beam Systems

4. Quality Control

- a. Equipment Safety (electrical, pinch points, emergency stop)
- b. Use of Phantoms and/or Calibration
- c. Troubleshooting
 - 1) shift or drift
 - 2) pass/fail
- d. Record Maintenance

5. Determining Quality in BMD

- a. Precision (definition)
- b. Accuracy (definition)
- c. Factors Affecting Accuracy and Precision
 - 1) scanner
 - 2) operator
 - 3) patient

C. RADIATION SAFETY (9)

1. Fundamental Principles

- a. ALARA
- b. Basic Methods of Protection
 - 1) time
 - 2) distance
 - 3) shielding

2. Biological Effects of Radiation

- a. Long-Term Effects
 - 1) cancer
 - 2) cataracts
 - 3) life-shortening
- b. Radiosensitive Tissues/Organs

3. Units of Measurement

- a. Absorbed Dose
 - 1) Rad
 - 2) Gray (Gy, mGy, μ Gy)
- b. Exposure (dose equivalent)
 - 1) rem, mrem
 - 2) Sievert (Sv, mSv, μ Sv)

4. Radiation Protection in BD

- a. General Protection Issues
 - 1) radiation signs posted
 - 2) door closed
 - 3) only patient and operator in room
- b. Occupational Protection
 - 1) scanner-operator distance
 - 2) personnel monitoring
 - 3) exposure records
- c. Patient Protection
 - 1) comparison levels of radiation
 - a. peripheral DXA
 - b. central DXA
 - c. natural background radiation
 - d. airline flight
 - e. chest x-ray
 - 2) strategies to minimize patient exposure
 - a. patient instructions
 - b. correct exam performance

D. DXA SCANNING OF FINGER (4)

1. Anatomy

- a. Regions of Interest
- b. Bony Landmarks
- c. Radiographic Appearance
- d. Adjacent Structures

2. Scan Acquisition

- a. Patient Instructions
- b. Patient Positioning
- c. Evaluating Pre-Set Scan Parameters

3. Scan Analysis

- a. BMD
- b. T-score, Z-score

4. Common Problems

- a. Nonremovable Artifacts
- b. Fractures or Pathology

(Continued on next page)

E. DXA SCANNING OF HEEL (OS CALCIS) (4)

1. **Anatomy**
 - a. Regions of Interest
 - b. Bony Landmarks
 - c. Radiographic Appearance
 - d. Adjacent Structures
2. **Scan Acquisition**
 - a. Patient Instructions
 - b. Patient Positioning
 - c. Evaluating Pre-Set Scan Parameters
3. **Scan Analysis**
 - a. BMD
 - b. T-score, Z-score
4. **Common Problems**
 - a. Nonremovable Artifacts
 - b. Fractures or Pathology

F. DXA SCANNING OF FOREARM (6)

1. **Anatomy**
 - a. Regions of Interest
 - b. Bony Landmarks
 - c. Radiographic Appearance
 - d. Adjacent Structures
2. **Scan Acquisition**
 - a. Patient Instructions
 - b. Patient Positioning
 - c. Evaluating Pre-Set Scan Parameters
3. **Scan Analysis**
 - a. Accurate ROI Placement
 - b. BMC, Area, and BMD
 - c. T-score, Z-score
4. **Common Problems**
 - a. Poor Bone Edge Detection
 - b. Nonremovable Artifacts
 - c. Variant Anatomy
 - d. Fractures or Pathology
5. **Follow-Up Scans**
 - a. Unit of Comparison
 - 1) BMD
 - 2) T-score
 - b. Reproduce Baseline Study

G. DXA SCANNING OF LUMBAR SPINE (8)

- 1. Anatomy**
 - a. Regions of Interest
 - b. Bony Landmarks
 - c. Radiographic Appearance
 - d. Adjacent Structures
- 2. Scan Acquisition**
 - a. Patient Instructions
 - b. Patient Positioning
 - c. Evaluating Pre-Set Scan Parameters
- 3. Scan Analysis and Printout**
 - a. Accurate ROI Placement
 - b. BMC, Area, and BMD
 - c. T-score, Z-score
- 4. Common Problems**
 - a. Poor Bone Edge Detection
 - b. Nonremovable Artifacts
 - c. Variant Anatomy
 - d. Fractures or Pathology
- 5. Follow-Up Scans**
 - a. Unit of Comparison
 - 1) BMD
 - 2) T-score
 - b. Reproduce Baseline Study

H. DXA SCANNING OF PROXIMAL FEMUR (8)

- 1. Anatomy**
 - a. Regions of Interest
 - b. Bony Landmarks
 - c. Radiographic Appearance
 - d. Adjacent Structures
 - 2. Scan Acquisition**
 - a. Patient Instructions
 - b. Patient Positioning
 - c. Evaluating Pre-Set Scan Parameters
 - 3. Scan Analysis and Printout**
 - a. Accurate ROI Placement
 - b. BMC, Area, and BMD
 - c. T-score, Z-score
 - 4. Common Problems**
 - a. Poor Bone Edge Detection
 - b. Nonremovable Artifacts
 - c. Variant Anatomy
 - d. Fractures or Pathology
 - 5. Follow-Up Scans**
 - a. Unit of Comparison
 - 1) BMD
 - 2) T-score
 - b. Reproduce Baseline Study
- (Continued on next page)*

EXAMINATIONS IN RADIOLOGIC TECHNOLOGY

BDEO CANDIDATE STATUS REPORT

Please review the following information very carefully and contact your state licensing agency with any corrections.
Please read your handbook for complete examination details.

ID#: 999999

DATE: 04/17/2009

**JOHN Q. PUBLIC
APARTMENT 1
MAIN STREET
ANYTOWN, USA 00000**

**SOCIAL SECURITY NUMBER: 123-45-6789
BIRTHDATE: 05/17/1979
EXAMINATION CATEGORY: BONE DENSITOMETRY EQUIPMENT OPERATOR
WINDOW START DATE: 04/22/2009
WINDOW END DATE: 07/21/2009**

**FOR THE STATE OF: YOUR STATE
DIRECT QUESTIONS TO: (555) 999-9999**

You have been assigned to take the examination as indicated above based upon the information you supplied to your state licensing agency. Please review the above information carefully and contact your state licensing agency at the number listed above if there are any corrections or changes before scheduling your appointment.

At the test center, you will be required to show two forms of identification. One must be a government-issued ID that contains a permanently affixed photo along with a signature and must not be expired. The second ID must contain your signature and must not be expired. Please see the list of acceptable IDs listed in the *Examination Handbook*. Test center administrators have been instructed not to admit anyone to the test center who does not have the required suitable IDs. Fees will not be refunded for those who are denied admission to the test center for failure to provide suitable identification.

NOTE:

Please direct all questions and personal information changes to your state licensing agency at the number listed above.

*Your score from this examination cannot be used for current or future certification by the ARRT.
Your score from this examination is valid only for state licensing purposes.*

See Reverse Side for Instructions on Scheduling Your Appointment

The American Registry of Radiologic Technologists®
Telephone: (651) 687-0048

To schedule, confirm, change, or cancel your examination date, time, or location

Call Pearson VUE at 1-800-632-9055

Record Your Exam Scheduling Information Here

- Call Center Representative: Confirmation Number:
- Date: Time:
- Test Center Address and Directions:

Scheduling the Appointment

It is your responsibility to contact Pearson VUE to schedule the date, time, and location of your exam. The exam administration must be scheduled between the assigned window dates printed on this *Candidate Status Report*. If you fail to schedule an appointment during your assigned window, your file will be closed and you will need to contact your state licensing agency to reapply.

Please call the Pearson VUE Call Center at **1-800-632-9055** to schedule your appointment. You may also schedule your appointment via the Internet at **www.pearsonvue.com/arrt**, where you will have to provide a return e-mail address. (See the Examination Handbook for Internet scheduling details.) Shortly after scheduling your appointment, Pearson VUE will send a confirmation letter to you - listing your appointment time and date, testing center location and directions to the testing center - via e-mail or US Postal Service. See the *Examination Handbook* for appointment confirmation information.

Changing the Examination Appointment

If you find it necessary to change your examination appointment, you must first call Pearson VUE to cancel your existing appointment in accordance with the guidelines printed in the *Examination Handbook* before requesting a new exam date or making changes in the test center location. See the *Examination Handbook* for details.

Changing the Examination Window Dates

If it is necessary to change your examination window, you must first call Pearson VUE to cancel your existing appointment BEFORE requesting an examination window change with your state licensing agency. Window dates cannot be changed if an appointment is scheduled. Requests for changes in the examination window dates must be submitted to your state licensing agency for approval on or before the last day of your current window.

Government-issued ID and Second ID with Signature Required

At the test center, you will be required to show two forms of identification. One must be a government-issued ID containing a permanently affixed photo, along with a signature, and must not be expired. The second ID must contain your signature and must not be expired. Please see the list of acceptable IDs in the *Examination Handbook*. The name on your *Candidate Status Report* must exactly match the name appearing on your IDs. Test center supervisors have been instructed not to admit anyone to the test center who does not have suitable ID. Fees will not be refunded for those denied admission to the test center for failure to provide suitable identification.

Calculators

You may use the basic 4-function calculator and/or the scientific calculator provided on the computer; or request a hand-held, basic 4-function calculator from the test center administrator. Personal calculators are prohibited for examinations in all disciplines.

Results

Examination results are not given at the test center or provided by the ARRT under any circumstances.

Examination results will be mailed to you by your state licensing agency.

Please allow four weeks for delivery of examination scores. If results are not received within four weeks, please contact your state licensing agency, not the ARRT.

Appeals

Candidates appealing test procedures must postmark appeals within two days of test administration. Candidates must notify ARRT in writing of any negative situations before exam results are processed. ARRT will not investigate complaints it receives after the candidate's results have been processed and sent to your state licensing agency. You should fax your appeal to (651) 687-0349. Please call (651) 687-0048, ext. 3155, to confirm.

**ALL CHANGES OR REQUESTS MUST BE MADE TO YOUR STATE LICENSING AGENCY
AT THE PHONE NUMBER LISTED ON THE FRONT OF THIS STATUS REPORT**

(11/08)

Sample Questions for the BDEO Exam

The following questions are similar in format to those in the examination, but they do not necessarily represent the full range of content or levels of difficulty. An answer key is provided at the end of the sample questions.

DIRECTIONS: Each of the questions or incomplete statements below is followed by four suggested answers or completions. Select the one that is beset in each case.

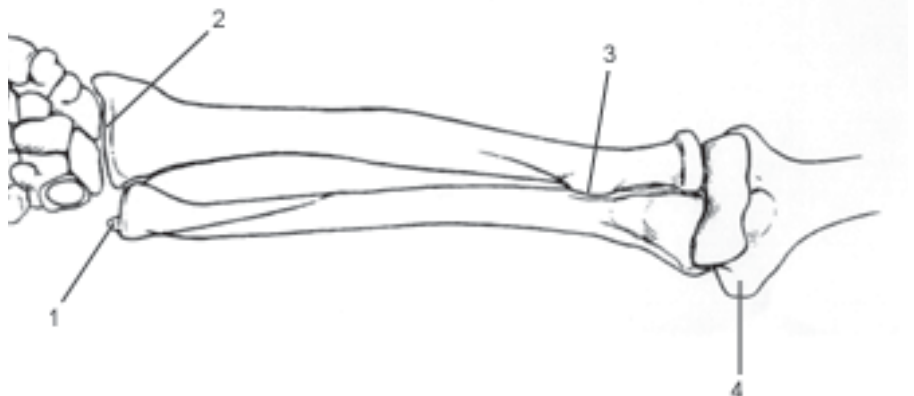
1. Osteoporosis most directly affects which anatomical system?
 - a. digestive
 - b. limbic
 - c. skeletal
 - d. urinary

2. Which of the following patients would have a contraindication for a DXA hip scan?
 - a. Patient with (single) hip replacement
 - b. Patient might be pregnant
 - c. Patient is taking steroids
 - d. Patient has a broken arm

3. If the total lumbr spine BMC is 45 g, and the area is 60cm², what is the BMD?
 - a. 1.33 g/cm²
 - b. 1.05 g/cm²
 - c. 0.75 g/cm²
 - d. 0.27 g/cm²

Item 4 refers to the anatomical sketch below.

4. Which of the following anatomical sites is required to determine forearm length for measuring bone density?
 - a. 1
 - b. 2
 - c. 3
 - d. 4



Key: 1 - C 2 - B 3 - C 4 - A

Computer-Based Testing Overview

After you have completed check-in procedures, test-center staff will show you to a work station and will make sure the computer is ready to deliver your exam. The testing session consists of four segments:

1. **Introduction, Nondisclosure Agreement, and Tutorial:** During this segment, the computer will verify your name and allow you to complete a tutorial if you choose. We strongly urge examinees to spend the few minutes to take the tutorial. You will also be asked to read and approve a nondisclosure clause – it requires that all candidates agree to **not** copy any test questions or otherwise disclose the content of the exam. You must agree to the terms of the nondisclosure statement; if you do not respond within 2 minutes your exam session will end. The entire introductory segment will take anywhere from a few minutes up to 20 minutes, depending on how much time you spend reviewing the tutorial.
2. **Examination Session:** You will be given the exam during this period. In addition to answering questions, you can mark questions for later review or even comment on questions. The clock will be running, so pace yourself. Most questions are in the standard multiple-choice format and require you to select one best answer. In addition, a small portion of the exam may consist of the question formats noted below:
 - a. *Select Multiple:* This format consists of a question or statement followed by a list of 4 to 8 response options. You are required to select all options that are correct.
 - b. *Sorted List:* This format presents a list of 4 to 8 options and requires you to place them in correct sequence. You accomplish this by using the mouse to “drag-and-drop” the options into a table so that they end up in proper order.
 - c. *Exhibits with Hot Spots:* This format consists of a question accompanied by a medical image, drawing, or other graphic. The question will ask you to identify a spot or region on the exhibit (e.g., identify the iliac crest). You do this by moving your mouse/cursor to the correct location on the image and then “left-clicking” the mouse. A red “X” will mark the location you choose; you will be able to move the “X” until you are satisfied with its location.

Sample questions illustrating these formats can be obtained from the ARRT website (Examinations>Exam Format and Length), or by contacting the ARRT. In addition, the tutorial at the test center presents an example of each format.

3. **Item Review and Exam Sign-Off:** After responding to all questions, you will have the opportunity to go back and review questions in the time remaining. You can change answers during the review. Once you select the “End Review” button you will no longer be able to go back to the exam. A sample review screen appears later in this Appendix.
4. **Survey:** After the exam a short survey consisting of 13 questions will appear. Most people complete it in just a few minutes. The survey is important because it gives you the opportunity to let ARRT know about the quality of your testing experience. If something went wrong – or exceptionally right – this is the place to tell us.

The following pages illustrate the approximate appearance of a few of the more important computer screens. Taking a few minutes now to review these pages will help prepare you for exam day.

Appearance of Test Questions

When the examination starts, the clock will be reset to the time allowed for the exam you are taking (see Exam Timing under the Exam Administration Day Section to find the time allotted for your exam). Test questions are presented in random order. The exam consists of a set number of scored questions plus several unscored pilot questions. The content specifications provide additional information about the number of questions and topics covered.

➔ **Note: Button location may vary.**

This **button** allows you to mark questions for later review. If uncertain of the best answer, then choose your best guess and flag the question for later review by clicking on the box. (This **button** can also be called "Select for Review".)

The clock indicates the time left to complete the exam.

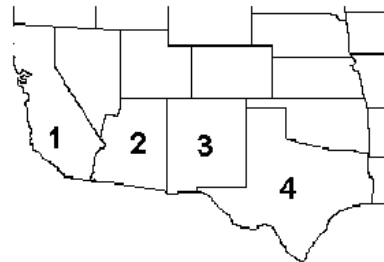
You can comment on specific test questions by clicking on the "Comment" **button**. The "Calculator" **button** gives access to an on-screen calculator (see next page).

The counter indicates which question you are on and the total number of questions on the exam.

Comment Calculator Time Remaining 03:29:20 3 of 180 Flag for Review

The Alamo is located in the state labeled as number.

- A 1
- B 2
- C 3
- D 4



Here is the test question. Choose one best answer by clicking the appropriate oval or letter (A, B, C, D). If the question requires a graphic, it will also appear on the screen.

Click on these **buttons** to go back to the previous question or ahead to the next one.

← Previous Next →

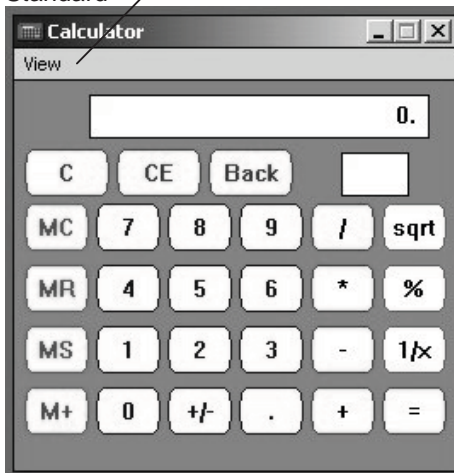
(continued on next page)

Online Calculator

The computer based testing software includes calculators very similar to those installed on most Windows® operating systems. To use the calculator, click on the "Calculator" button. You can operate the calculator by using the mouse to click on numbers or arithmetic operations. Alternatively, the keyboard can be used.

The "View" button on the calculator allows you to toggle between the Standard and Scientific calculators. Note that most calculations on the exam can be done with the Standard calculator. However, some candidates may wish to use the Scientific calculator for certain calculations. Most keys are obvious, except for the e (exponent) function, as noted below.

Standard

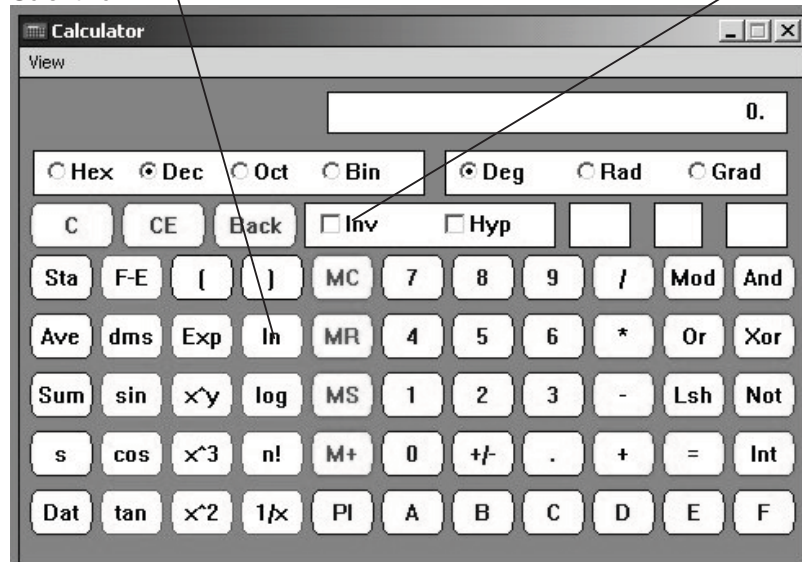


The e button is not immediately seen on the Scientific calculator. To raise e to some power use the inverse function in conjunction with the key for the natural logarithm:

1. Enter the value of the exponent of e.
2. Check the "Inv" box.
3. Press the "ln" button.

Example: To find e raised to the first power, first enter the value 1 by clicking on the "1" button or by typing 1 on the keyboard. Next check the "Inv" box, and then click the "ln" button. The result should be 2.7182. In other words, $e^1=2.7182$.

Scientific



Exam Review

After you have completed all questions on the exam, a screen appears that allows you to go back to review questions. A filled-in flag icon appears next to any questions that you selected for review.

➔ **Note: Button location may vary.**



Exam Review

☰ Instructions

You can review your questions in two (2) different ways.

The buttons in the lower right-hand corner correspond to these choices:

1. Review all of your questions and answers.
2. Review questions that are flagged for review. (Click the "flag" icon to change the flagged for review status.)

☰ Main_VS1R Section (180 Questions, 180 Complete)

| | | | | | |
|---------------|----------|---------------|----------|----------------|----------|
| 🚩 Question 1 | Complete | 🚩 Question 61 | Complete | 🚩 Question 121 | Complete |
| 🚩 Question 2 | Complete | 🚩 Question 62 | Complete | 🚩 Question 122 | Complete |
| 🚩 Question 3 | Complete | 🚩 Question 63 | Complete | 🚩 Question 123 | Complete |
| 🚩 Question 4 | Complete | 🚩 Question 64 | Complete | 🚩 Question 124 | Complete |
| 🚩 Question 5 | Complete | 🚩 Question 65 | Complete | 🚩 Question 125 | Complete |
| 🚩 Question 6 | Complete | 🚩 Question 66 | Complete | 🚩 Question 126 | Complete |
| 🚩 Question 7 | Complete | 🚩 Question 67 | Complete | 🚩 Question 127 | Complete |
| 🚩 Question 8 | Complete | 🚩 Question 68 | Complete | 🚩 Question 128 | Complete |
| 🚩 Question 9 | Complete | 🚩 Question 69 | Complete | 🚩 Question 129 | Complete |
| 🚩 Question 10 | Complete | 🚩 Question 70 | Complete | 🚩 Question 130 | Complete |
| 🚩 Question 11 | Complete | 🚩 Question 71 | Complete | 🚩 Question 131 | Complete |

➔ End Review
🚩 Review All
✖ Review Incomplete
🚩 Review Flagged

This **button** ends the exam. When you are done with your review, click this **button** to exit.

Once you click "End Review" you will no longer be able to review questions or change answers, so be sure you are really ready to stop! (This **button** can also be called "End Exam".)

You can return and review all questions on the exam by clicking on the "Review All" **button**.

You can return to the questions you selected for review by clicking on the "Review Flagged" **button**. To review all items on the exam, just click on "Review All."

If you click this **button** you will see that you have no incomplete questions, because skipping of questions is not an option on ARRT exams.

After the Examination

After you click "End Review" you will not be able to return to the exam.

After you end the exam, a short survey appears on the screen. It asks a few important questions about the quality of the test administration and provides a place for you to type any general comments. We appreciate your feedback.

Pearson VUE Test Centers

This list may change after publication in this handbook. For an up-to-date list at any time, check the www.pearsonvue.com/arrt website.

| | | | | | |
|---|---|--|--|--|---|
| Alabama Birmingham Decatur Dothan Mobile Montgomery | Plantation Port Charlotte Tallahassee Tampa | Maryland Baltimore Bethesda Columbia Salisbury | New Mexico Albuquerque | Rhode Island Warwick | West Virginia Charleston Morgantown |
| Alaska Anchorage | Georgia Albany Atlanta Augusta Macon Savannah | Massachusetts Boston Springfield Waltham Worcester | New York Albany Brooklyn East Syracuse Endicott Islandia New York Rego Park Rochester Staten Island Utica Watertown White Plains Williamsville | South Carolina Columbia Greenville North Charleston | Wisconsin Brookfield Eau Claire Kenosha Madison |
| Arizona Mesa Phoenix Tucson | Hawaii Honolulu | Michigan Ann Arbor Grand Rapids Lansing Marquette Southfield Troy | North Carolina Asheville Charlotte Greenville Raleigh Wilmington Winston-Salem | South Dakota Sioux Falls | Wyoming Casper |
| Arkansas Fort Smith Little Rock Texarkana | Idaho Boise | Minnesota Bloomington Brooklyn Park Eagan Hermantown Rochester | North Dakota Bismarck West Fargo | Tennessee Chattanooga Johnson City Knoxville Memphis Nashville | U.S. Territories Amer. Samoa/ Pago Pago Guam/Tamuning N. Mariana Islands/Saipan Puerto Rico/ San Juan Virgin Islands/ St. Thomas |
| California Anaheim Fresno Gardena Oakland Ontario Pasadena Redding Roseville San Diego San Francisco San Jose Santa Maria Westlake Village | Illinois Chicago Marion Matteson Peoria Schaumburg Springfield | Mississippi Ridgeland Tupelo | Ohio Bath Beachwood Cincinnati Columbus Dayton Gahanna Maumee Westlake | Texas Abilene Amarillo Austin Bellaire Corpus Christi Dallas El Paso Houston Hurst Lubbock Midland San Antonio Tyler Waco | Canada Toronto, ON Montreal, QU Winnipeg, MB Burnaby, BC |
| Colorado Greenwood Village Pueblo Westminster | Indiana Evansville Fort Wayne Indianapolis Merrillville Terre Haute | Missouri Columbia Kansas City Springfield St. Louis | Oklahoma Oklahoma City Tulsa | Utah Draper Ogden | International Asia/Pacific: Sydney, Australia Hong Kong, Hong Kong Tokyo, Japan Yokohama, Japan Seoul, Korea Manila, Philippines |
| Connecticut Wallingford Wethersfield | Iowa Coralville Davenport Sioux City W. Des Moines | Montana Billings Helena | Oregon Beaverton Medford Salem | Vermont South Burlington | Europe: London, England Paris, France Frankfurt, Germany Rome, Italy Madrid, Spain |
| Dist. of Columbia Washington | Kansas Hays Topeka Wichita | Nebraska Lincoln North Platte Omaha | Pennsylvania Allentown Erie Harrisburg Horsham Lancaster Pittsburgh Scranton Wayne | Virginia Lynchburg Newport News Richmond Roanoke Vienna | |
| Delaware Dover Newark | Kentucky Lexington Louisville | Nevada Las Vegas Reno | | Washington Renton Seattle Spokane Yakima | |
| Florida Gainesville Jacksonville Miami Orlando | Louisiana Baton Rouge Metairie Shreveport | New Hampshire Concord | | | |
| | Maine Bangor Westbrook | New Jersey Atlantic City Lyndhurst Princeton Somerset | | | |

Appendix F

State Licensing Agencies

This list may change after publication in this handbook. For an up-to-date list at any time, check the www.arrrt.org website.

| | | |
|-------------|----------------|---|
| Arizona | (602) 255-4845 | Medical Radiologic Technology Board of Examiners 4814 South 40th St. Phoenix, AZ 85040 |
| Arkansas | (501) 661-2166 | Arkansas Department of Health Radiation Control Section 5800 W 10th St. Little Rock, AR 72204 |
| California | (916) 327-5106 | Department of Public Health, Radiological Health Branch PO Box 997414, MS #7610 Sacramento, CA 95899-7414 |
| Colorado | (303) 692-3448 | Colorado Department of Public Health and Environment Radiation Control Program HMWMD 4300 Cherry Creek Dr. S., #B2 Denver, CO 80246-1530 |
| Connecticut | (860) 509-7603 | Department of Public Health – Radiography Licensure 410 Capitol Ave, MS #12APP Hartford, CT 06134-0308 |
| Delaware | (302) 744-4546 | Delaware Division of Public Health – Office of Radiation Control Jesse Cooper Bldg. / 417 Federal St. Dover, DE 19901 |
| Florida | (850) 245-4910 | Division of Medical Quality Assurance, Radiologic Technology Program 4052 Bald Cypress Way, Bin C85 Tallahassee, FL 32399-3285 |
| Hawaii | (808) 586-4700 | Noise and Radiation Branch 591 Ala Moana Blvd. / PO Box 3378 Honolulu, HI 96813-2498 |
| Illinois | (217) 785-9913 | Illinois Emergency Management Agency, Division of Nuclear Safety 1035 Outer Park Dr. Springfield, IL 62704 |
| Indiana | (317) 233-7565 | Indiana State Dept. of Health, Division of Medical Radiology Services 2 North Meridian St., 5F Indianapolis, IN 46204-3003 |
| Iowa | (515) 281-0415 | Iowa Department of Public Health, Bureau of Radiological Health Lucas State Office Bldg., 5th floor Des Moines, IA 50319 |
| Kentucky | (502) 564-3700 | Department of Health Services, Radiation Control Branch HS 1 C-A, 275 East Main St. Frankfort, KY 40621 |

(Continued on next page)

State Licensing Agencies, continued

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|---------------|----------------|--|
| Louisiana | (504) 838-5231 | Louisiana State Radiologic Technology, Board of Examiners 3108 Cleary Ave., Suite 207 Metairie, LA 70002 |
| Maine | (207) 624-8626 | Radiologic Technology Board of Examiners State House Station #35 Augusta, ME 04333-0035 |
| Maryland | (410) 764-4777 | Maryland Board of Physicians 4201 Patterson Ave. / PO Box 2571 Baltimore, MD 21215-0002 |
| Massachusetts | (617) 242-3035 | Radiation Control Program, R.T. Licensing Schrafft Center, Suite 1M2A 529 Main St. Charlestown, MA 02129 |
| Minnesota | (651) 201-4545 | Department of Health, Radiation Control Section 625 Robert St. N., PO Box 64975 St. Paul, MN 55164 |
| Mississippi | (601) 364-7360 | State Department of Health, Professional Licensure PO Box 1700 Jackson, MS 39215-1700 |
| Montana | (406) 841-2385 | Montana Board of Radiologic Technologists PO Box 200513, 301 South Park, 4 th Floor Helena, MT 59620-0513 |
| Nebraska | (402) 471-2118 | Professional & Occupational Licensure Division 301 Centennial Mall So. / PO Box 94986 Lincoln, NE 68509 |
| New Jersey | (609) 984-5634 | Bureau of Radiological Health PO Box 415 Trenton, NJ 08625 |
| New Mexico | (505) 476-3264 | Radiation Control Bureau PO Box 26110 Santa Fe, NM 87502-6110 |
| New York | (518) 402-7580 | NYS Dept of Health, Bureau of Environmental Radiation Protection 547 River St., Room 530 Troy, NY 12180-2216 |
| Ohio | (614) 752-4319 | Ohio Dept. of Health, Radiologic Licensure 246 N. High St. / PO Box 118 Columbus, OH 43215 |
| Oregon | (971) 673-0215 | Board of Radiologic Technology Suite 1160A State Office Bldg., 800 NE Oregon St. Portland, OR 97232 |
| Pennsylvania | (717) 783-1400 | Bureau of Prof. & Occup. Affairs, State Board of Medicine PO Box 2649 Harrisburg, PA 17105-2649 |
| Rhode Island | (401) 222-2827 | Rhode Island Dept of Health, Div. of Professional Regulations 3 Capitol Hill, Room 104 Providence, RI 02908 |

State Licensing Agencies, continued

| | | |
|----------------|----------------|--|
| South Carolina | (803) 771-6141 | South Carolina Radiation Quality Standards Association PO Box 7515 Columbia, SC 29202 |
| Tennessee | (615) 532-4384 | Tennessee Board of Medical Examiners Heritage Place Metro Center 227 French Landing #300 Nashville, TN 37243 |
| Texas | (512) 834-6617 | DSHS – Medical Radiologic Technologist Certification Program 1100 West 49th St. Austin, TX 78756-3183 |
| Utah | (801) 530-6628 | Division of Occupational and Professional Licensing 160 East 300 South / PO Box 146741 Salt Lake City, UT 84114-6741 |
| Vermont | (802) 828-1505 | Office of Professional Regulations National Life Building, North FLZ Montpelier, VT 05620 |
| Virginia | (804) 367-4501 | Virginia Board of Medicine Perimeter Center, Ste. 300 9960 Mayland Dr. Richmond, VA 23233 |
| Washington | (360) 236-4700 | Washington State Department of Health Health Professions Quality Assurance PO Box 47865 Olympia, WA 98504-7866 |
| West Virginia | (304) 787-4398 | WV MI & RTT Board of Examiners 1715 Flat Top Rd. / PO Box 638 Cool Ridge, WV 25825 |
| Wyoming | (307) 777-3507 | State of Wyoming Board of Radiologic Technologists Examiners 1800 Cavey Ave., 4th Floor Cheyenne, WY 82002 |

BDEO Examination Handbook Checklist

When you receive your Candidate Status Report form from ARRT ...

- Check that your name on the Candidate Status Report form matches your name on your government-issued photo ID.
- If your names do not match, notify your state licensing agency — not ARRT — immediately, and before scheduling an exam appointment. (Any candidate showing up at the test center with names that do not match will not be permitted to take the exam.)
- If your names on your IDs and CSR match, you may proceed to schedule your examination appointment by phoning the number indicated on the status report, or schedule on Pearson VUE's website at www.pearsonvue.com/arrt.
- Be sure to note the dates of your examination window, the 90-day period during which you must schedule and take the exam. If you are running out of time, request an extension as detailed on page 6.
- If you have to cancel or reschedule an appointment follow the procedures detailed on page 8.

At the test center...

- You will be required to present two IDs, *one* of which must be a current government-issued photo ID and *both* of which must have your signature (review page 10 for details on ID requirements).
- After your identification is established, keep your IDs in your possession.

Following the exam...

- ARRT will forward your score information to your state licensing agency. Scores are not available from ARRT or Pearson VUE or at the test center.
- If you don't receive your results within four weeks, phone your state licensing agency — not ARRT.

Important Notice: State Licensing is Not ARRT Credentialing

The American Registry of Radiologic Technologists® does not certify individuals based upon the results of the Bone Densitometry Equipment Operator Examination. ARRT administers this examination program solely for use by state agencies. If you are interested in national certification in bone densitometry or other disciplines, consult the www.arrt.org website or phone ARRT at (651) 687-0048.