CSCS®
Computer-based Exam Candidate Handbook

Certified Strength and Conditioning Specialist®

Includes:

About the CSCS Exam
Page 4

Registration/Exam Policies
Page 6

CSCS Exam Content
Page 17

National Strength and Conditioning Association
Bridging the gap between science and application™

Table of Contents

Introduction
About the NSCA 4
About NSCA Certification....4
Certified Strength and Conditioning Specialist Exam 4
Explanation of Non-scored Exam Questions....4
Exam Administration....5
Exam Development....5
Quality Control 5

Registration Policies
Prerequisites....6
Candidate Ineligibility....6
Statement of Nondiscrimination....7
Special Arrangemets for Candidates with Disabilities....7
Exam Appointment Changes 7
Exam Refunds/Forfeiture....7
Exam Transfers....8
Failure to Report 8
Inclement Weather, Power Failure or Emergency 8

Exam Policies
On the Day of the Exam 8
Security 9
Misconduct....9
Copyrighted Exam Questions....10
Release of Information 10
Confidentiality....10
Privacy Policy 10
Cancelled Scores....10
Reasons for Disciplinary Actions 11

Exam Scheduling
Assessment Center Locations....12
Scheduling an Exam Appointment 12
Holidays 12

At The Exam
What to Expect at the Assesssment Center....13
Actual Exam 13
Candidate Comments 13
Conclusion of the Exam 14
Reporting of Results 14
Pass/Fail Score Determination 14
Review of Exam Questions 14

After The Exam
If You Pass the Exam....15
Reestablishing Exam Eligibilty 15
Exam Scoring Appeals....15
Recertification Requirements....15
Recertification Appeals....15
Address Changes 16
Certification Verification....16

Code Of Ethics
Code of Ethics 16

Exam Content Outline
Exam Content....17
CSCS Scientific Foundations Section Outline 17
CSCS Practical/Applied Section Outline 19

Sample Exam Questions
Sample Exam Questions....23

Study Tips
Study Tips 24

Special Accommodations Request Form
Special Accommodations Request Form 25

Copyright ©2009. National Strength and Conditioning Association (NSCA). All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy or recording, or any information and retrieval system, without written permission from The NSCA.

Introduction

About the NSCA

The National Strength and Conditioning Association (NSCA) is an international, nonprofit, educational association representing strength training and conditioning professionals, sports science researchers, athletic trainers, sports medicine therapists and physicians, personal trainers, students and others interested in fitness and strength and conditioning activities and their relationship to overall sport and fitness performance.

The NSCA publishes two of the world's premier strength and conditioning journals—*Strength and Conditioning Journal* and the *Journal of Strength and Conditioning Research*. They link what is being learned in the sport science research laboratories to what is being taught by fitness professionals, thereby bridging the gap between theory and practice.

About NSCA Certification

In 1985, NSCA Certification was established in order to administer a certification program for those in the field of strength training and conditioning. Initially the CSCS Agency, this organization later became known as NSCA Certification. The NSCA's original certification program, the Certified Strength and Conditioning Specialist® (CSCS®) continues to be the only nationally-accredited certification that is specifically designed to assess competencies of those who strength train and condition athletes.

As the fitness industry continued to grow, the NSCA Certification Committee saw a need for a personal training certification that would earn the same prestige and credibility as the CSCS. Thus, in 1993, the NSCA-Certified Personal Trainer® (NSCA-CPT®) credential was established. Today, more than 36,000 CSCS and NSCA-CPT credentials are held by professionals across the world.

The CSCS® Exam

After years of development, the Certified Strength and Conditioning Specialist (CSCS) was initiated in 1985. The CSCS credential identifies those individuals who have knowledge in the scientific foundations of strength training and conditioning as well as the skills to apply that knowledge in a practical format.

The CSCS Exam consists of a Scientific Foundations section and a Practical/Applied section, which are administered on the same day. The actual testing time required to take both sections of the exam is approximately four hours, excluding the break between the exam sections.

Candidates taking the exam for the first time must register and take both sections. Those who pass one section may become certified after retaking and passing the failed section. Candidates who achieve passing scores on both sections of the exam are awarded the CSCS credential.

The scientific foundations section of the exam is 90 minutes in length and consists of 80 scored and 10 non-scored multiple-choice questions in the content areas of exercise science and nutrition. The scientific foundations section was developed to objectively measure the candidate's academic preparation and to set uniform standards for measuring such knowledge.

The practical/applied section of the exam is 2 1/2 hours in length and consists of 110 scored and 10 non-scored multiple-choice questions to cover the content areas of program design, exercise technique, facility policies/procedures, testing and other practical applications. Additionally, the candidate views a video that shows various exercises and performance tests. There are 40 scored questions on the practical/applied section related to the exercises/tests shown on the video. Candidates respond to multiple-choice questions while viewing the video.

The policies and procedures described herein regarding the CSCS program will continue to be modified in response to changes in the profession as directed by the NSCA. Such modifications will be announced to candidates via our website (www.nsca-cc.org), NSCA Bulletin or special mailings.

Non-scored Questions

The CSCS Exam contains non-scored questions that are being "pretested" or evaluated for future use. Including this type of question allows the CSCS Exam Development Committee to collect meaningful information about new questions that may appear as real scored questions on future exams.

Pretesting is accomplished by interspersing new ("untried") questions throughout the exams (10 non-scored questions appear in each section of the CSCS Exam). Only this small number is included so that additional testing time will not be needed by exam candidates. These questions are not scored as part of a candidate's certification exam, and they do not affect an individual's pass/fail status. The non-scored questions are scattered throughout the exam so candidates will answer them with the same effort that they give to the actual scored questions.

To keep the CSCS Exam reflective of current job-related duties, new questions must continuously be introduced and evaluated. Pretesting is an accepted testing practice that creates a statistically sound standardized exam and allows candidates to receive immediate or "instant" scores that are based only on previously used ("tried") questions.

Non-scored pretest questions also appear on the traditional "paper and pencil" exam to provide the same testing experience to all candidates, regardless of which exam format a candidate chooses. Despite that instant score reports are not available for paper and pencil candidates, the practice of including non-scored questions ensures candidates are treated equally so that test scores are comparable and not influenced by exam format.

Exam Administration

The NSCA Certification Committee has the overall responsibility for exam development and policies governing eligibility and administration of the exam. It is also responsible for contracting with a professional testing agency that is responsible for the establishment of test centers, administration of the exams and exam security, as well as providing psychometric expertise.

Applied Measurement Professionals, Inc. (AMP) is the professional testing agency retained by the NSCA Certification Committee to assist in the development, administration, scoring and analysis of the CSCS Exam based on the exam specifications developed by the NSCA Certification Committee. AMP is a research and development firm that conducts professional competency assessment research and provides exam services for a number of health practitioner credentialing programs.

Neither the NSCA, nor the NSCA Certification Committee members, or their staff are involved with the handling or scoring of any exam in any way. This is the testing agency's responsibility.

Exam Development

The CSCS Exam Development Committee (EDC), comprised of individuals whose knowledge and experience in exercise sciences, strength training and conditioning and personal training qualifying them as "content experts," develops the exam questions. The committee develops specifications from a job task analysis study that is completed every five years that defines the content areas to be covered, the number of questions on the exam and the abilities and skills measured by the exam.

The CSCS Exam is monitored constantly for content validity and updated for timeliness. It is designed to ensure a minimum level of competency among practitioners and creates a better awareness among the public of the nature and purpose of the profession. One focal point of the exam is to demonstrate that candidates possess appropriate knowledge of industry guidelines for the safe and effective strength training and conditioning of athletes.

Quality Control

Each exam undergoes quality control checks. A thorough item analysis is completed and is used as a part of the statistical review of the performance of the exam. The NSCA, AMP and the EDC review exam data and candidate comments. All of these materials are reviewed during a key validation meeting with the EDC to ensure that the scoring of the questions is appropriate. Candidates can provide written comments about any exam question. However, those comments do not have a bearing on a candidate's exam score. Rather, they serve a purpose of "requesting attention" of the EDC. All candidate comments are reviewed for relevance and accuracy, but these comments are not taken as statements to argue or challenge the exam (either at the time of the exam or afterward).

Registration Policies

Prerequisites

To qualify to take the Certified Strength and Conditioning Specialist exam, candidates must: (1) hold at least a Bachelor's degree as defined by the United States educational system OR be a currently enrolled college senior from an accredited educational institution* OR hold a degree in chiropractic medicine AND (2) have current CPR and AED certification. At a minimum, the NSCA requires adult CPR and AED certification.

Candidates must submit an original, official transcript of their academic work, showing attainment of at least a Bachelor's degree or chiropractic medicine degree granted by an accredited institution. The NSCA will not release a candidate's exam scores until we have received an official transcript verifying graduation and degree earned.

Candidates must submit an original, official transcript of their academic work, showing attainment of at least a Bachelor's degree or chiropractic medicine degree granted by an accredited institution.

College seniors can take the CSCS Exam; however, they must be enrolled in an accredited institution.* For college seniors, the NSCA will not release their score reports until a transcript verifying graduation and noting the degree earned has been received.

College seniors will receive a pass/fail notification after the exam administration. However, college seniors who pass the CSCS Exam do not become CSCS certified until: (1) they have graduated from college and (2) the NSCA receives their original, official transcript verifying graduation and degree earned. Once the NSCA receives the required documentation (original, official transcript verifying graduation and degree earned), the NSCA will release the actual score reports and issue certificates (if passed).

****In the United States:*** The accrediting institutions are Middle State Association, New England Association, North Central Association, Northwest Association, Southern Association and Western Association.

****Outside the United States:*** The college/university must be recognized by the ministry of education in that particular country, as a degree-granting institution on the same level as other universities recognized with campuses in that country, and the degree earned must be recognized as equivalent to a Bacherlor's degree in the United States.

Current CPR and AED certification is also a certification requirement. The NSCA will accept any adult CPR and AED certification obtained by attending a CPR and AED course that meets the following criteria:

- ❑ Must have a hands-on training component (certification through a course completed entirely online will not be accepted)
- ❑ Must include a skills performance evaluation

Examples of approved providers include:

- ❑ American Heart Association
- ❑ American Red Cross
- ❑ National Safety Council
- ❑ St. John Ambulance

If candidates do not have current CPR and AED certification they can still register for and take the CSCS Exam. The NSCA will not release a candidate's exam scores until we have received documentation of a valid CPR and AED certification.

Please mail your documentation to:
National Strength and Conditioning Association
c/o Certification Department
1885 Bob Johnson Drive
Colorado Springs, CO 80906

Candidate Ineligibility

A candidate may be determined ineligible for either of the following reasons:

1. insufficient documentation to assess eligibility
2. documentation provided, or fees submitted, do not meet eligibility requirements for the exam

The NSCA Certification Committee reserves the right to cancel exam scores if an individual is deemed ineligible to meet the certification requirements. If a candidate is determined to be ineligible, a refund of

his/her registration fee will **NOT** be provided. If a candidate has any questions regarding eligibility, contact the NSCA at 800-815-6826 or exams@nsca-lift.org **BEFORE** registering for an exam.

Statement of Nondiscrimination

The NSCA and AMP do not discriminate among candidates based on race, color, creed, gender, religion, national origin, disability or marital status.

Special Arrangements for Candidates with Disabilities

The NSCA and AMP comply with the Americans with Disabilities Act and strive to ensure that no individual with a disability is deprived of the opportunity to take an exam solely by reason of that disability. AMP will provide reasonable accommodations for candidates with disabilities.

When a candidate requests special accommodations, the candidate must:

1. Submit the Request for Special Examination Accommodations Form provided at the end of this document at least 45 calendar days prior to the desired exam date.

2. Call AMP at 888-519-9901 to schedule the exam. When scheduling the exam, candidates need to inform AMP of the need for special accommodations.

    a. Wheelchair access is available at all established assessment centers. Candidates must advise AMP at the time of scheduling that wheelchair access is necessary.

    b. Candidates with visual, sensory or physical disabilities that would prevent them from taking the exam under standard conditions may request special accommodations and arrangements.

If the candidate does not provide the information within the specified time frame (at least 45 calendar days before the exam) or if the NSCA and/or AMP determine that the provided information is inadequate to assess special needs requirements, candidates will be asked to provide additional information/documentation and given a deadline by which they need to respond. If the required information is not received by the specified deadline, the NSCA will deny the request for accommodations.

(Special language accommodations will not be made for those whose primary language is not English.)

AMP is equipped with Telecommunication Devices for the Deaf (TDD) to assist deaf and hearing-impaired candidates. TDD calling is available 8:30am to 5:00pm (Central time) Monday-Friday at 913-495-4437. This TDD phone option is for individuals equipped with compatible TDD machinery.

Exam Appointment Changes

Candidates who do not schedule an exam appointment and take the exam within 120 days from the date their eligibility is confirmed will forfeit their entire registration fee. A completed registration and exam fee are required to reschedule for the exam.

Exam Refunds/Forfeiture

- ❑ Candidates deemed ineligible for an exam will not receive a refund of their registration fee. If you have any questions regarding your eligibility, contact the NSCA at 800-815-6826 or exams@nsca-lift.org. If a candidate has any questions regarding eligibility, contact the NSCA at 800-815-6826 or exams@nsca-lift.org **BEFORE** registering for an exam.

- ❑ Refunds are not granted on cancelled computer-based exam registrations. Candidates wishing to cancel their exam appointment will forfeit their entire registration fee.

- ❑ A candidate who arrives for the exam more than 15 minutes late—for any reason—forfeits the registration and all fees paid to take the exam. A completed registration and exam fee are required to reschedule for the exam.

Registration/Exam Policies

Exam Transfers

- ❑ Candidates can transfer ONLY into an exam for which there are available testing slots (dates and times).
- ❑ Candidates wishing to extend their 120-day window with an additional 120 days = $100 fee.
- ❑ Candidates wishing to transfer from a paper/pencil exam to a computer-based exam = $150 transfer fee.

Failure to Report

A candidate who fails to report for an exam, forfeits the registration and all fees paid to take the exam. A completed registration and exam fee are required to reschedule for the exam.

Inclement Weather, Power Failure or Emergency

In the event of inclement weather or unforeseen emergencies on the day of an exam, AMP will determine whether circumstances warrant the cancellation, and subsequent rescheduling of an exam. Candidates may contact AMP's Weather Hotline at 913-495-4418 (24 hours/day) prior to the exam to determine if AMP has been advised that any assessment centers are closed.

Typically, the exam is NOT rescheduled if the assessment center personnel are able to open the assessment center. If power to an assessment center is interrupted temporarily during an administration, AMP will restart the exam from where it left off so that candidates may continue the exam.

Every attempt is made to administer the exam as scheduled; however, should an exam be cancelled at an assessment center, all scheduled candidates will receive information about rescheduling procedures.

On the Day of the Exam

On the day of your exam appointment, report to the assessment center no later than your scheduled testing time. Signs indicating AMP Assessment Center check-in will be posted in the H&R Block office. A CANDIDATE WHO ARRIVES MORE THAN 15 MINUTES AFTER THE SCHEDULED TESTING TIME WILL NOT BE ADMITTED.

To gain admission to the assessment center, a candidate needs to present two forms of valid identification, one with a current photograph. Both forms of identification must be current and include the candidate's current name and signature. Acceptable forms of identification include a current:

1. Driver's license with photograph
2. State identification card with photograph
3. Passport
4. Military identification card with photograph
5. Social security card (secondary form)

Employment ID cards, student ID cards and any type of temporary identification are NOT acceptable as primary identification. Candidates are prohibited from misrepresenting their identities by falsifying information to obtain admission to the assessment center.

Security

The NSCA and AMP maintain exam administration and security standards that are designed to assure that all candidates are provided the same opportunity to demonstrate their abilities. The assessment center is continuously monitored by audio and video surveillance equipment for security purposes.

The following security procedures apply during the exam:

- ❑ Exams are proprietary. No cameras, notes, tape recorders, Personal Digital Assistants (PDAs), pagers or cellular phones are allowed in the testing room. Use of a cellular phone or other electronic devices is strictly prohibited and will result in dismissal from the exam and forfeiting the entire registration fee.
- ❑ Pencils will be provided during check-in. Candidates will be provided with scratch paper to use during the exam. If a second piece of scratch paper is needed, candidates may ask the test proctor for another piece of paper and turn in the one they used before. Candidates must sign and return the scratch paper to the supervisor at the completion of testing or they will not receive a score report.
- ❑ No documents or notes of any kind may be removed from the exam room.
- ❑ No calculators are permitted in the assessment center or testing room.
- ❑ No guests, visitors or family members are allowed in the testing room or reception areas.
- ❑ No personal belongings are allowed in the assessment center. Only keys and wallets may be taken into the testing room. AMP, the NSCA, and the testing center are not responsible for items left in the reception area.

Other Restrictions:

- ❑ No questions concerning the content of the exam may be asked.
- ❑ Eating, drinking or smoking are not permitted in the assessment center.
- ❑ Candidates may take a break whenever they wish, but they are not allowed additional time to make up for time lost during breaks.

Misconduct

Individuals who engage in any of the following conduct may be dismissed from the exam, their scores will not be reported and exam fees will not be refunded. Examples of misconduct are when a candidate:

- ❑ Creates a disturbance or is abusive or otherwise uncooperative;
- ❑ Displays and/or uses electronic communications equipment such as pagers, cellular phones, PDAs;
- ❑ Gives or receives help, or is suspected of doing so;
- ❑ Attempts to record exam questions or make notes;
- ❑ Attempts to take the exam for someone else; or
- ❑ Is observed with notes, books or other aids.

Exam Policies

Copyrighted Exam Questions

All exam questions are the copyrighted property of the NSCA. It is forbidden under federal copyright law to copy, reproduce, record, distribute or display these exam questions by any means, in whole or in part. Doing so may subject you to severe civil and criminal penalties.

Release of Information

Both the NSCA and its testing agency are committed to protecting the confidentiality of candidate records. For this reason, exam scores are never released by telephone, fax or email, even to candidates. Also, information regarding individual candidate scores is never released to any third party. Verification of the certified status of an individual, however, is provided upon receipt of a written request.

Confidentiality

Information about candidates for testing and their exam results are considered confidential. Studies and reports concerning candidates will contain no information identifiable with any candidate, unless authorized by the candidate.

Privacy Policy

The NSCA is committed to the right of privacy for certified individuals (Certified Strength and Conditioning Specialist and NSCA-Certified Personal Trainer) and exam candidates. The NSCA will exercise care with customer property and personal information while it is under our control, or used by the NSCA. The NSCA staff will handle and protect customer property/information as is done with all NSCA property. Only employees authorized by the Executive Director (or designee) will have access to customer files. The designated employees are responsible for maintaining the confidentiality of the information in those files.

The NSCA staff will not discuss, disclose or release any information submitted for certification purposes to any third party without the certificate holder's or candidate's written consent.

- ❑ The exam candidate needs to make all inquiries pertaining to material submitted for certification exams and/or information related to the exam administration.
- ❑ With the exception of verification of certification, written consent from the certificate holder or exam candidate is required prior to the release of any information from the individual's record.

To complete and submit the "Authorization to Release Information Form," please visit the NSCA Website at www.nsca-lift.org/nscapdf/view.asp or contact the NSCA at exams@nsca-lift.org to receive a faxed or mailed copy of this release form.

The NSCA reserves the right to modify its Privacy Policy without prior notification. In the event that we make a material change to our policy, we will post a notice of the change on the NSCA Website (www.nsca-lift.org).

Cancelled Scores

The testing agency is obligated to the NSCA Certification Committee to report scores that accurately reflect the performance of each candidate. For this reason, the testing agency maintains exam administration and exam security standards that are designed to ensure that all candidates are provided the same opportunity to demonstrate their abilities and to prevent some candidates from gaining an unfair advantage over others due to testing irregularities or misconduct. The testing agency routinely reviews irregularities and exam scores suspected of resulting from unusual or nonstandard circumstances and reports such to the NSCA Certification Committee.

Exam Policies

The NSCA Certification Committee reserves the right to withhold or cancel exam scores if, in its opinion, there is reason to question their validity or to investigate a violation of the testing regulations. Scores considered for cancellation by the NSCA Certification Committee may be grouped into two categories:

1. Suspected candidate misconduct: In such cases, the NSCA may initially withhold exam scores and notify the candidates so that they have the opportunity to provide additional information as requested by the NSCA Certification Committee. The NSCA Certification Committee may also undertake a confidential review of the circumstances giving rise to questionable score validity. If it is determined that there is sufficient cause to question score validity, the NSCA Certification Committee may cancel the score(s) and inform the involved parties.

2. Irregularities: Scores may be withheld and/or cancelled because of circumstances beyond the candidate's control, such as computer malfunctions. In such cases, candidates will be informed and, if the NSCA Certification Committee determines that scores must be cancelled, offered an opportunity to retake the exam.

In addition to the reasons listed, the NSCA Certification Committee may withhold or cancel exam results if, upon investigation, a violation of policies, as outlined in this publication, is found to have been committed.

No Shows

Candidates who do not arrive to take the exam, and who do not cancel or transfer their registration, will forfeit the registration fee.

Reasons for Disciplinary Action

The NSCA Certification Committee has approved the following items as reasons why candidates for the CSCS Exam may be refused or for which exam candidates or credentialed individuals may be disciplined, up to and including the revocation of their certified status:

1. Obtaining or attempting to obtain certification by fraud, deception or artifice.

2. Knowingly assisting another person or other persons in obtaining or attempting to obtain certification by fraud, deception or artifice.

3. Illegal use or falsification of certification certificates, credentials or any other CSCS documents.

4. Unauthorized possession and/or distribution of any official CSCS testing materials to include copying and/or reproduction of any part of the CSCS exam questions or scenarios.

5. Unauthorized use of any of the registered trademarks owned by the NSCA. These include the association and certification logos.

6. Not accumulating and/or reporting the required number of CEUs, or not paying the recertification fee within the applicable time period.

When the NSCA becomes aware of an incident that may fall into one of the preceding categories, a judicial committee is convened to begin a structured investigation to determine whether any disciplinary action will be taken.

Upon receipt of the notice of the judicial committee's decision, the charged party has 30 days to file a written appeal of the decision to the NSCA. Upon receipt of an appeal, the NSCA Certification Committee reviews the record of the case and determines whether to affirm or modify the judicial committee's decision.

Exam Scheduling

Assessment Center Locations

Exams are administered by computer at more than 160 AMP Assessment Centers geographically distributed throughout the United States. Assessment centers are typically located in H&R Block offices. Assessment center locations, detailed maps and directions can be found at www.nsca-cc.org/cbt/locations. Specific address information will be provided when a candidate schedules an exam appointment.

Scheduling an Exam Appointment

After you have received notification of your eligibility from the NSCA, you may schedule an exam appointment by one of the following methods. Candidates can schedule up to two days before the testing date. *NOTE: Be prepared to confirm a date and location for testing and to provide your assigned ID number, which you will receive after you have completed your online registration.*

1. Online: The candidate may schedule an exam appointment online at any time by using our online registration scheduling service at www.nsca-cc.org.

OR

2. Telephone: Call AMP at 888-519-9901 to schedule an exam appointment. You can reach an AMP representative from 7:00am to 7:00pm (Central time) Monday through Thursday, 7:00am to 5:00pm on Friday and 8:30am to 5:00pm on Saturday.

The exams are administered by appointment Monday through Friday at 9:00am and 1:30pm (with some select Saturday appointments available). Individuals are scheduled on a first-come, first-served basis. Refer to the chart below.

If you call to schedule an exam appointment by 3:00pm Central time on …	Depending on availability, your exam may be scheduled beginning …
Monday	Wednesday
Tuesday	Thursday
Wednesday	Friday
Thursday	Monday (Saturday, if available)
Friday	Tuesday
Saturday	Wednesday

When the appointment is made, the candidate will choose a time to report to the assessment center. Candidates will receive a confirmation email with the location, date and time. The candidate can only take the exam for which the appointment has been made; no changes in exam type can be made at the assessment center. *NOTE: Unscheduled candidates (walk-ins) will not be admitted to the assessment center.*

Holidays

The exams are not offered on the following holidays: New Year's Day, Martin Luther King Day, Presidents' Day, Good Friday, Memorial Day, Independence Day (July 4), Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, Christmas Eve Day, Christmas Day, and New Year's Eve Day.

At The Exam

What to Expect at the Assessment Center

After confirming the candidate's identification, the candidate will sign in and will be directed to a testing station. The candidate will receive on-screen instructions to enter his/her assigned ID number. The candidate's photograph will be taken and displayed throughout the exam session. This photograph will also print on the score reports.

Prior to attempting the exam, the candidate will be given the opportunity to practice taking an exam on the computer. Please note that this practice exam is to help the candidate become familiar with the computerized exam format. Also note that it is possible that the practice exam questions will not relate to strength and conditioning. The time used for this practice session is NOT counted as part of the exam time or score. When the candidate is comfortable with the computer-testing process, he/she may quit the practice session and begin the timed exam.

Following the practice session, instructions for taking the exam will be provided on-screen. Then the candidate will begin the actual timed exam.

Actual Exam

The computer monitors the time the candidate spends on the exam. The exam will stop when the testing time has expired. Candidates can click on the "Time" box in the lower right-hand corner of the screen or select the "Time" key to monitor the time. A digital clock indicates the time remaining for the candidate to complete the exam. The "Time" feature may be hidden during the exam.

Only one exam question is presented at a time. The question number appears in the lower right-hand corner of the screen. Choices of answers to the exam question are identified as A, B, C or D. Candidates must indicate the answer choice by either typing the letter into the response box in the lower left-hand corner of the computer screen, or by clicking in the option using the mouse. To change the answer, just enter a different option by pressing the A, B, C or D key or by clicking on the option using the mouse. Candidates can change their answer as many times as they wish during the exam time limit.

To move to the next question, click on the forward arrow (>) in the lower right-hand portion of the screen or select the "NEXT" key. This action will move the candidate forward through the exam, question by question. Should the candidate wish to review any question(s), he/she can click the backward arrow (<) or use the left arrow key to move backward through the exam.

Candidates may leave an exam question unanswered for return later in the testing session. Questions may also be bookmarked for later review by clicking in the blank square to the right of the "Time" button. Click on the hand icon or select the "NEXT" key to advance to the next unanswered or bookmarked question on the exam. To identify all unanswered and bookmarked questions, repeatedly click on the hand icon or press the "NEXT" key. When the exam is completed, the number of exam questions answered is reported. If not all questions have been answered and there is time remaining, return to the exam and answer those questions. Be sure to provide an answer for every question before ending the exam. Any blank answers will be scored as incorrect.

Candidate Comments

During the exam, online comments may be provided for any question by clicking on the button displaying an exclamation point (!) to the left of the "Time" button. This opens a dialogue box where comments may be entered. Comments will be reviewed, but individual responses will NOT be provided. Comments will not be considered in the grading process, but will be used during future exam development. If the candidate leaves the test center and still has comments to provide about the exam and/or the test administration, he/she should forward written comments to the NSCA at exams@nsca-lift.org. All comments should be sent no later than five business days after the test date.

At The Exam

Conclusion of the Exam

After completing the exam, candidates are asked to complete a short evaluation of their testing experience.

Reporting of Results

If a candidate has met all of the eligibility requirements and paid all of the fees, he/she will receive a score report at the assessment center.

If a candidate is a college senior who is taking the CSCS Exam but he/she has **NOT** yet graduated, he/she will receive a "Passed" or "Failed" notification at the assessment center. The actual exam scores will **NOT** be released until the candidate sends an official transcript confirming that at least a Bachelor's degree was earned. College seniors who pass the CSCS Exam do **NOT** become certified until they graduate and send a transcript to the NSCA.

If a candidate has a "hold" placed on his/her registration, he/she will **NOT** receive the results; instead he/she will receive a notice that indicates additional documentation is needed and information on how to contact the NSCA. Scores will be sent out within 10 business days after the NSCA receives the required documentation.

If a candidate indicates that he/she is an NSCA Member but his/her membership status cannot be verified, he/she will receive a notice that indicates additional documentation is needed and information on how to contact the NSCA. The exam results will not be sent until proof of membership is provided.

If a candidate has passed one section of the exam and failed the other, the passing score will be valid for one calendar year from the date the passing score was achieved. If the failed section has not been retaken and passed by that date, the candidate must retake BOTH sections of the exam.

Score reports will be held for one calendar year from the date of the exam. If the hold has **NOT** been cleared in that time (i.e., the candidate has **NOT** provided the required documentation), the exam results become void. If a candidate wants to become certified after that point, he/she is required to submit a registration with the appropriate fee and retake the exam.

Scores are not reported over the telephone, electronic mail or by facsimile—even to the exam candidate.

Pass/Fail Score Determination

The total scaled score will determine whether the candidate passed. This scaled score is statistically derived from the raw score and can range from 1 through 99. The passing scaled score is 70 for the exam.

The reason for calculating scaled scores is that different forms (or versions) of the exam may vary in difficulty. As new forms of the exam are introduced, a certain number of questions in each content area are replaced by new questions. These changes may cause one form of the exam to be slightly easier or more difficult than another form. To adjust for these differences in difficulty, a procedure called "equating" is used. The goal of equating is to ensure fairness to all candidates.

The methodology used to set the minimum passing score is called the Angoff method, based upon the data which is gathered during the performance of a passing point study and is conducted by a panel of experts in the field. The experts evaluated each question on the exam to determine how many correct answers are necessary to demonstrate the knowledge and skills required to pass this exam.

A candidate's ability to pass the exam depends on the amount of knowledge displayed and is not based upon the performance of others taking the exam (i.e., the exam is not based on a "curve").

Review of Exam Questions

The NSCA will not accommodate a request to review missed or incorrect exam questions. From the initiation of the exam program, the NSCA has not permitted any candidate access to the exam materials (test

booklet and answer forms) other than during the time that he/she was actually taking the exam. This policy is consistent with other nationally recognized certifying or licensing bodies. The NSCA has devoted a significant effort to develop valid and reliable exams. Allowing candidates to review exams would compromise the security of our exams and their reliability.If You Pass the Exam

If You Pass the Exam

All candidates who pass the exam will receive a certificate and recertification information within 15 business days.

Reestablishing Exam Eligibility

A candidate who fails the exam may reregister for the CSCS Exam online at www.nsca-cc.org. Candidates who fail the exam (or one section of the CSCS Exam) are eligible to retest after a 90-day waiting period. Note that candidates are allowed to immediately reregister for an exam (or a section of the CSCS Exam) and schedule for a date as long as the date selected is beyond the 90-day window.

Exam Scoring Appeals

In computer-based testing, the computer accepts responses from a keyboard or mouse in digitized form. As a result, computer-based testing eliminates problems that may have previously arisen with scanning paper/pencil answer sheets, since all responses are recorded by candidates during their exam. However, candidates receiving failing scores may request that the exam score be verified. Candidates must request this score verification in writing to the NSCA and provide a $25 fee. Candidates may contact the NSCA via email at exams@nsca-lift.org, fax at 719-632-6367 or through the mail at 1885 Bob Johnson Drive, Colorado Springs, CO 80906. Please know that AMP has not encountered one occasion when an exam score changed as a result of score verification. Requests must be submitted to the NSCA, in writing, within 12 months after the exam.

Recertification Requirements

Candidates who pass the exam will receive information concerning requirements associated with the NSCA's Recertification Program. It is important that newly certified individuals thoroughly read and understand this information in order to retain their certification. Certified Strength and Conditioning Specialists are required to earn 6.0 CEUs (typically 1 contact hour equals 0.1 CEU) over specific three-year periods (2006 – 2008, 2009 – 2011, etc.) to maintain their certification. Those certified within an existing three-year period will have their initial CEU requirement prorated to the end of the reporting period.

A recertification fee for each certification is assessed for each three-year period. Those holding both certifications (CSCS and NSCA-CPT) may not need to acquire separate CEUs for each certification, as CEUs acquired will apply to both certifications in most cases.

No CEUs will be awarded for activities completed prior to becoming certified. In addition to earning and reporting Continuing Education Units (CEUs), or retaking the exam, all certified individuals must maintain current adult CPR certification in order to retain the CSCS credential.

More information regarding recertification requirements can be found in the NSCA Recertification Policies and Procedures, which can be downloaded at www.nsca-lift.org/nscapdf/view.asp.

Recertification Appeals

Any action taken by the NSCA Certification Committee affecting the status of a certificate holder may be appealed. Appeals must be in writing and received within 90 days after receipt of such notice. You can send appeals to the NSCA Certification Committee at 1885 Bob Johnson Drive, Colorado Springs, CO 80906 or to exams@nsca-lift.org.

After the Exam

Address Changes

The address provided on a candidate's registration will be used for future mailings. If candidates have a change of address, they should notify the NSCA. Candidates can update their address with the NSCA in one of the following ways:

1. Visit www.nsca-cc.org and submit the Change of Address Form online
2. Call 800-815-6826
3. Email exams@nsca-lift.org
4. Send a fax to 719-632-6367
5. Mail the information to NSCA, 1885 Bob Johnson Drive, Colorado Springs, CO 80906

Certification Verification

To request verification of a CSCS or NSCA-CPT certification, the Certification Verification Form located at www.nsca-cc.org/contact/certification_verification.html must be submitted to the NSCA.

Code of Ethics

With the credibility possessed by the CSCS and NSCA-CPT exams comes the responsibility to ensure the integrity of the credentials awarded. The Code of Ethics of the NSCA was established to make our certified individuals aware of the standards of ethical behavior that should be followed in the practice of their profession (strength training and conditioning and personal training). The Code presents fundamental standards of behavior that all certified individuals should strive to achieve. It serves to increase ethical sensitivity and judgement, strengthen support for certified individuals' moral courage and sharpen their sense of identity as an integral part of the NSCA and its continued success. To review the entire Code of Ethics for Certified Individuals, visit www.nsca-lift.org/nscapdf/download/Code_of_Ethics_for_Certified_Individuals.pdf.

Certified individuals shall:

1. Respect the rights, welfare and dignity of all individuals.
2. Strive to provide equal and fair treatment to all individuals and not discriminate against anyone.
3. Provide and maintain a safe and effective training environment.
4. Comply with all general laws of the land including, but not limited to, applicable business, employment and copyright laws.
5. Accept responsibility for the use of sound judgment when working with their clientele.
6. Respect the confidentiality of their clientele while remaining accountable.
7. Refer their clientele to more qualified fitness, medical or health professionals when appropriate.
8. Remain current on practical and theoretical foundations through continuing education activities.
9. Avoid engaging in any behavior or form of conduct that would constitute a conflict of interest or actions that adversely reflect on the profession or the National Strength and Conditioning Association
10. Strive to safeguard the public by reporting violations of this Code of Ethics.

CSCS Scientific Foundations Section Outline

Domain	Percent of Exam Section	Number of Scored Questions
Exercise Sciences	71%	57
Nutrition	29%	23
Total	**100%**	**80**

1. Exercise Sciences (57 scored questions)

A. Understand muscle anatomy and physiology:
   1. Muscle anatomy (muscle group names, specific muscle names, muscle fiber/cell structures, etc.)
   2. Muscular dynamics involved during movement patterns (e.g., sliding filament theory, type of muscle action)

B. Understand neuromuscular anatomy and physiology:
   1. Neuromuscular anatomy (e.g., motor unit, Type I and II fibers, muscle spindle, Golgi tendon organ)
   2. Neuromuscular responses to exercise (motor unit recruitment patterns, nerve conduction, summation, etc.)

C. Understand the basic principles of biomechanics regarding exercise selection, execution and sport performance:
   1. Kinetic laws and principles of movement (lever systems, momentum, torque, power, work, force, center of gravity, impulse, center of pressure, force-velocity curve, force-time curve, etc.)
   2. Kinematic laws and principles of movement (anatomical planes of movement, joint angles, isometric/isotonic/isokinetic, velocity, etc.)
   3. Role of muscles in movement (e.g., agonist, antagonist, synergist, neutralizer, stabilizer)

D. Understand bone and connective tissue (tendons and ligaments) anatomy and physiology:
   1. Bone and connective tissue anatomy
   2. Bone and connective tissue responses to exercise

E. Understand bioenergetics and metabolism:
   1. Characteristics of the energy systems
   2. Effects of manipulating training variables (i.e., mode, intensity, duration, volume and work:rest ratio) to target specific energy systems

F. Understand neuroendocrine physiology:
   1. Functions of hormones (testosterone, growth hormone, etc.)
   2. Neuroendocrine responses to exercise

G. Understand cardiopulmonary anatomy and physiology:
   1. Cardiopulmonary anatomy (structure of the heart, vascular system, lungs, etc.)
   2. Cardiopulmonary responses to exercise

H. Understand physiological adaptations to exercise:
   1. Adaptations to aerobic exercise and training
   2. Adaptations to anaerobic exercise and training
   3. Causes, signs, symptoms and effects of overtraining and detraining

I. Understand the anatomical, physiological and biomechanical differences of athletes (based on age, gender, training status, specific sport or activity, etc.):
   1. Anatomical, physiological and biomechanical differences among athletes
   2. Effects of age and developmental status on performance
   3. Implications of training status (i.e., untrained versus trained) on designing a training program

J. Understand the psychological techniques used to enhance training and performance:
   1. Motivational techniques (reward system, mental imagery techniques, reinforcement strategies, visualization, etc.)
   2. Methods that enhance motor learning and skill acquisition (instruction, feedback, whole versus part practice, etc.)

2. Nutrition (23 scored questions)

A. Explain nutritional factors affecting health and performance:
   1. Health-related and performance-related application of nutrition concepts (food groups, food exchanges, "MyPyramid," glycemic index, etc.)
   2. Basic nutritional needs of individuals and the unique nutritional needs of athletes for carbohydrate, protein, fat, vitamins and minerals
   3. Caloric expenditure based on exercise intensity (e.g., VO_2, Kcals/min, METs)
   4. Coronary artery disease risk factors associated with dietary choices (e.g., a high intake of cholesterol, triglycerides and/or saturated fat)
   5. Effects of hydration status and electrolyte balance/imbalance on health and performance
   6. Nutritional density (i.e., foods with a large amount of a given nutrient)

B. Explain the strategies and results of manipulating food choices and training methods to maximize performance:
   1. Training/nutritional programs that produce specific changes in body composition (i.e., fat loss or lean body mass increase)
   2. Composition and timing of nutrient and fluid intake before, during and after an exercise session or a sport event (i.e., when to consume and how much to consume)
   3. Nutritional factors that affect muscular endurance, hypertrophy, strength and aerobic endurance

C. Recognize signs, symptoms and behaviors associated with eating disorders and altered eating habits:
   1. Signs and symptoms associated with disordered eating, bulimia and anorexia
   2. Body composition changes and performance variations associated with eating disorders
   3. Recognize the nature of an athlete's nutritional status and determine the appropriateness of a referral to a qualified health care professional

D. Explain the effects, risks and alternatives of common performance-enhancing substances and methods:
   1. Ergogenic aids and dietary supplements (creatine, carbohydrate loading, anabolic steroids, blood doping, etc.)
   2. Signs and symptoms of ergogenic aid abuse

CSCS Practical/Applied Section Outline

Domain	Percent of Exam Section	Number of Scored Questions
Exercise Technique	36%	39
Program Design	36%	40
Organization and Administration	10%	11
Testing and Evaluation	18%	20
Total	**100%**	**110**

1. Exercise Technique (39 scored questions)

A. Describe, teach and evaluate proper resistance training exercise technique:
   1. Free weight training equipment:
      a. Teach proper preparatory body and limb position (e.g., grip, stance, alignment)
      b. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
      c. Identify and correct improper exercise technique
   2. Resistance machines (pulley, cam, hydraulic, friction, air, tubing, etc.):
      a. Teach proper preparatory body and limb position (e.g., grip, stance, alignment)
      b. Teach execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
      c. Identify and correct improper exercise technique
   3. Alternative modes (core, stability, balance, calisthenic, body weight only, functional, etc.):
      a. Teach the proper preparatory body and limb position (e.g., grip, stance, alignment)
      b. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
      c. Identify and correct improper exercise technique

B. Describe, teach and evaluate proper plyometric exercise technique:
   1. Teach the proper preparatory body and limb position (e.g., stance, posture, alignment)
   2. Teach execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   3. Identify and correct improper exercise technique

C. Describe, teach and evaluate proper speed/sprint technique (resisted and assisted sprinting, speed-strength, etc.):
   1. Teach proper preparatory body and limb position (e.g., stance, posture, alignment)
   2. Teach execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   3. Identify and correct improper exercise technique

D. Describe, teach and evaluate proper agility technique (forward, backward and lateral movements; turn, transition and stop-and-go maneuvers, etc.):
   1. Teach proper preparatory body and limb position (e.g., stance, posture, alignment)
   2. Teach execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   3. Identify and correct improper exercise technique

E. Describe, teach and evaluate proper aerobic endurance exercise technique:
   1. Cardiovascular equipment (treadmill, stationary bike, rowing machine, stair-stepper, elliptical trainer, etc.):

a. Explain machine programming and setup
b. Teach the proper preparatory body and limb position (e.g., grip, stance, alignment)
c. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
d. Identify and correct improper exercise technique

2. General body-only activities (walking, jogging, running, swimming, etc.):
   a. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   b. Identify and correct improper exercise technique

F. Describe, teach and evaluate proper flexibility exercise technique:
1. Static stretching exercises:
   a. Teach the proper preparatory body and limb position (e.g., stance, posture, alignment)
   b. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   c. Identify and correct improper exercise technique
2. Proprioceptive Neuromuscular Facilitation (PNF) stretching exercises:
   a. Teach the proper preparatory body and limb position (e.g., stance, posture, alignment)
   b. Identify proper body mechanics to perform PNF-stretching on an athlete
   c. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   d. Identify and correct improper exercise technique
3. Dynamic and ballistic stretching exercises:
   a. Teach the proper preparatory body and limb position (e.g., stance, posture, alignment)
   b. Teach the execution of proper technique (e.g., body and limb positions, movement mechanics, breathing)
   c. Identify and correct improper exercise technique

G. Describe and teach effective spotting procedures and techniques:
1. Identify the number of spotters needed for a given situation or exercise
2. Teach correct spotter location (i.e., the physical placement of the spotter or spotters in relation to the lifter)
3. Teach proper body and limb placement required when spotting the lifter (once in the correct position)

2. Program Design (40 scored questions)

A. Design training programs that maximize performance by incorporating various training methods and modes based upon an athlete's health status, strength and conditioning levels and training goals:
1. Describe different types of training methods and modes (resistance, plyometric, speed/sprint, interval, agility, aerobic, flexibility, etc.)
2. Manipulate and combine various training methods and modes to reach a certain goal or outcome (muscular endurance, hypertrophy, strength, power, aerobic endurance, etc.)

B. Design training programs that maximize performance and muscle balance by selecting exercises based upon an athlete's health status, strength and conditioning levels and training goals:
1. Identify exercises that are specific to movement patterns of a particular sport (e.g., an exercise and its application and effectiveness for a sport, an exercise and movements involved in a sport, an exercise and muscles used in sport)

2. Classify exercises (as power, core, assistance, structural, etc.) based upon the type or number of the involved muscle group or groups (e.g., what exercise trains certain muscle(s); how to change an exercise to change the involved muscles)
3. Classify exercises based upon type of kinetic chain movement (i.e., open or closed)
4. Choose exercises to promote muscular balance (hamstring versus quadriceps, upper body versus lower body, etc.)

C. Design training programs that maximize performance by applying the principles of exercise order based upon an athlete's health status, strength and conditioning levels and training goals:
   1. Select the order of exercises based on the training goal
   2. Differentiate between various exercise orders (large to small muscle groups, alternating push with pull, alternating upper body exercises with lower body exercises, warm-up/workout/cool-down, plyometric then aerobic exercise, etc.)

D. Design training programs that maximize performance by determining and assigning appropriate exercise intensities (load, resistance, heart rate, etc.) based upon an athlete's health status, strength and conditioning levels and training goals:
   1. Describe commonly accepted methods for assigning an exercise load (a percent of the 1RM or the athlete's body weight, RM loads, etc.) or exercise heart rate (i.e., a percent of maximum heart rate or functional capacity, the Karvonen method)
   2. Assign a load or exercise heart rate based on the training goal (muscular endurance, hypertrophy, strength, power, aerobic endurance, etc.)

E. Design training programs that maximize performance by determining and assigning appropriate training volumes (defined as sets x reps) based upon an athlete's health status, strength and conditioning levels and training goals:
   1. Explain the outcomes associated with the manipulation of training volume
   2. Assign a volume based on the training goal (muscular endurance, hypertrophy, strength, power, aerobic endurance, etc.)

F. Design training programs that maximize performance by determining and assigning appropriate work periods/duration and rest periods, recovery methods and training frequencies based upon an athlete's health status, strength and conditioning levels and training goals:
   1. Assign a work period/duration, a rest period and recovery methods based on the training goal (muscular endurance, hypertrophy, strength, power, aerobic endurance, etc.)
   2. Assign a training frequency based on the training goal (muscular endurance, hypertrophy, strength, power, aerobic endurance, etc.)

G. Design training programs that maximize performance by determining and assigning appropriate exercise progression based upon an athlete's health status, strength and conditioning levels and training goals:
   1. Describe when and how to progress exercise mode, intensity, duration and frequency
   2. Assign an exercise progression based on the training goal (muscular endurance, hypertrophy, strength, power, aerobic endurance, etc.)

H. Design training programs that maximize performance by applying the principles of periodization:
   1. Explain periodization (the periods/phases/cycles, the types of training programs associated with the phases/periods/cycles, etc.)
   2. Describe training variations based on a sport season (i.e., a certain training period, phase, or cycle for a specific sport season)
   3. Design a periodized program specific to the demands of a sport or sport position
   4. Design a periodized program specific to an athlete's training level

I. Design training programs for an injured athlete during the reconditioning period (i.e., assigning safe and appropriate exercises for a given injury or condition under the direction of an athletic trainer, physical therapist or physician)

3. Organization and Administration (11 scored questions)

A. Determine how to design, layout and organize the strength and conditioning facility:
   1. Understand the optimal physical design considerations when constructing the facility (flooring, ceiling height, mirror placement, ventilation, lighting, etc.)
   2. Recognize the characteristics of the equipment within the facility
   3. Apply strategies to efficiently arrange and properly space the equipment within the facility
   4. Identify the specific space and equipment needs of the athletic groups that use the facility

B. Identify the primary duties and responsibilities of the members of the strength and conditioning staff

C. Determine the policies and procedures associated with the operation of the strength and conditioning facility:
   1. Establish criteria that defines access to the facility
   2. Establish the rules individuals must follow when using the facility
   3. Apply strategies to organize and effectively schedule the athletic groups that use the facility

D. Create a safe training environment within the strength and conditioning facility:
   1. Establish checklists and schedules for facility maintenance and cleaning
   2. Establish checklists and schedules for equipment maintenance and cleaning
   3. Identify common litigation issues and ways to reduce or minimize the risk of liability within the facility
   4. Establish procedures to respond to an emergency in the training environment
   5. Recognize symptoms relating to overuse, overtraining and temperature-induced illness
   6. Recognize when to refer an athlete to and/or seek input from an appropriate health care professional (athletic trainer, physical therapist, physician, registered dietitian, etc.)

4. Testing and Evaluation (20 scored questions)

A. Select and administer appropriate tests to maximize test reliability and validity:
   1. Select a valid test or tests based upon the unique aspects of a sport, sport position and training status
   2. Develop the test administration procedures that use equipment, personnel and time efficiently

B. Administer testing protocols and procedures properly to ensure reliable data collection:
   1. Describe testing equipment and its proper use
   2. Explain the testing procedures (warm-up, how to test, test order, proper rest between trials, etc.)
   3. Administer the tests to assess physical characteristics (body weight, girth, body fat, height, etc.) and evaluate performance (muscular strength, power, anaerobic capacity, muscular endurance, aerobic endurance, agility, speed, flexibility, etc.)

C. Evaluate and interpret test results:
   1. Recognize typical and atypical test results based on a sport or sport position (i.e., determine if the test result was good or poor)
   2. Determine how the test results should influence the design or modification of the training program (i.e., determine which outcome of training needs to be improved in a future program)

Sample Exam Questions

1. Which of the following shoulder movements and planes of action are associated with the upward movement phase of the side lateral shoulder raise exercise?

   A. adduction/sagittal
   B. abduction/sagittal
   C. abduction/frontal
   D. adduction/frontal

2. An untrained college-aged athlete begins a resistance training program. After training for three weeks, her strength increases dramatically. Which of the following is the most influential factor responsible for this improvement?

   A. increased cross-sectional area of Type I fibers
   B. increased number of muscle fibers
   C. improved ratio of muscle to fat components
   D. improved neuromuscular efficiency

3. What is the MINIMUM amount of carbohydrates that a 132-pound (60-kg) competitive Olympic triathlete should consume on a daily basis?

   A. 120 grams
   B. 480 grams
   C. 960 grams
   D. 1,920 grams

4. When running, which of the following contributes the most to minimizing the braking effect of a heel foot strike?

   A. eccentric hip extension
   B. concentric hip extension
   C. eccentric hip adduction
   D. concentric hip adduction

5. Which of the following components of mechanical load is the LEAST important for stimulating new bone formation?

   A. rest period
   B. magnitude
   C. rate of loading
   D. direction of force

Answers: (1) C (2) D (3) B (4) B (5) A

Study Tips

Tips for taking the CSCS Exam

Below are some general preparation tips that might be helpful to you—please note that these tips do not guarantee success on the exam.

General Study Tips

- ❑ Review the CSCS Exam Preparation Suggestions located at www.nsca-lift.org/nscapdf/view.asp to determine what study materials and references you could use.
- ❑ Examine the content outline (page 17). Concentrate on areas you feel would be most beneficial to you and locate these areas in the study materials. The content outline can also be found at www.nsca-lift.org/nscapdf/view.asp.
- ❑ Review for the exam anywhere from three to nine months, depending on your educational and professional background.

Tips for Taking the Exam

- ❑ Read every question and all of the choices carefully before choosing an answer. If necessary, make sure to use the scroll bar to view all of the answers.
- ❑ Do not read too much into the questions. Use common sense in tandem with your expertise when reviewing the question/answers. Remember that the answers are based on the reference information and not individual practices dictated by physicians, facilities where you work, etc.
- ❑ You are allowed only one piece of scratch paper at a time. If you need a second piece, you will need to ask the proctor for another piece of paper and turn in the used one you have.
- ❑ During the exam, online comments may be provided for any question by clicking on the button displaying an exclamation point (!), which is found to the left of the "Time" button. This opens a dialogue box where you may enter your comments. Comments are reviewed, but individual responses are NOT provided or considered in the grading process.
- ❑ Please note that you are not allowed to take purses or other personal belongings, including cell phones, into the exam room.
- ❑ You are allowed to take restroom breaks; however, you will only have the designated time to complete the exam.
- ❑ Use of a calculator, Personal Digital Assistant (PDA), etc. are not permitted.
- ❑ Exam room sizes and climates vary, so dress in layers to ensure personal comfort.

REQUEST FOR SPECIAL EXAMINATION ACCOMMODATIONS

If you have a disability covered by the Americans with Disabilities Act, please complete this form and the Documentation of Disability-Related Needs on the reverse side so your accommodations for testing can be processed efficiently. The information you provide and any documentation regarding your disability and your need for accommodation in testing will be treated with strict confidentiality.

Candidate Information

Social Security # _____ – _____ – _____ Requested Assessment Center:_____

Name (Last, First, Middle Initial, Former Name)

Mailing Address

City State Zip Code

Daytime Telephone Number

Special Accommodations

I request special accommodations for the _____ examination.

Please provide (check all that apply):

_____ Special seating or other physical accommodations

_____ Reader

_____ Extended testing time (time and a half)

_____ Distraction-free room

_____ Other special accommodations (Please specify.)

_____

_____

_____

Comments: _____

_____

Signed: _____ **Date:** _____

Submit this form to:

AMP
18000 W. 105th Street
Olathe, KS 66061-7543
Fax: 913/895-4650

If you have questions, call AMP's Candidate Support Center at 913/895-4600.

DOCUMENTATION OF DISABILITY-RELATED NEEDS

Please have this section completed by an appropriate professional (education professional, physician, psychologist, psychiatrist) to ensure that AMP is able to provide the required accommodations.

Professional Documentation

I have known _____ since _____ / _____ / _____ in my capacity as a
Examination Candidate — Date

_____.
Professional Title

The candidate discussed with me the nature of the test to be administered. It is my opinion that, because of this candidate's disability described below, he/she should be accommodated by providing the special arrangements listed on the reverse side.

Description of Disability: _____

_____

_____

Signed:_____ Title:_____

Printed Name: _____

Address:_____

_____

Telephone Number:_____ E-mail Address:_____

Date: _____ License # (if applicable): _____

Submit this form to:

AMP
18000 W. 105th Street
Olathe, KS 66061-7543
Fax: 913/895-4650

If you have questions, call AMP's Candidate Support Center at 913/895-4600.

NSCA Certification Department • 1885 Bob Johnson Dr., Colorado Springs, CO 80906
Phone: 719-632-6722 • Toll-free: 800-815-6826 • Fax: 719-632-6367 • Email: exams@nsca-lift.org

www.nsca-lift.org

201101