

# CCCVI Glossary of Terms; Item Statuses; Development Processes and Action Points

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## Glossary of Terms

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<b><u>Certification</u></b>	The voluntary process through which an organization grants recognition to an individual after verifying that he or she has met minimum criteria (eligibility) and including but not limited to passing an exam/assessment. Certifications are generally granted for a time delimited period after which they must recertify.
<b><u>Certificate (program)</u></b>	A voluntary program in which an organization grants recognition to an individual after verifying that he or she has met minimum criteria, including participation in a training or education program and demonstrating comprehension of the program's learning outcomes by passing an exam/assessment.
<b><u>Recertification</u></b>	The process for renewing one's certification. This is generally required within a set time period. For CBCCT and CBNC, Diplomates must recertify every 10 years.
<b><u>Maintenance of Certification</u></b>	A continuous process designed to document that certified individuals maintain the necessary competencies to practice the specialty in which they are certified.
<b><u>Exam Program:</u></b>	The overall processes, policies and agents which are part of a professional certification exam.
<b><u>High-Stakes Exam:</u></b>	An exam with important consequences to the examinee, for example, which may help or hinder ability to be reimbursed, whether the individual is credentialed or gains privileges, or is hired or promoted.
<b><u>Minimally Qualified Candidate:</u></b>	The examinee for whom the exam is directed. This candidate is has the basic competence and fundamental knowledge and skills to perform nuclear cardiology or cardiovascular CT in an effective and safe manner.
<b><u>Base Level Competence:</u></b>	The level of skill and knowledge the exam endeavors to test; the expected ability of the Minimally Qualified Candidate (see above).
<b><u>Item:</u></b>	An examination question
<b><u>Multiple-Choice Item:</u></b>	A question that provides alternative response choices from which the correct answer is to be selected. CBCCT and CBNC use four options, for which only one option is the correct or best answer.
<b><u>MCQ</u></b>	Multiple-Choice Question (see Multiple-Choice Item above).

- Stem:** The initial part of the question in which the task is defined or the problem is posed -- it may be a question, directions or an incomplete statement.
- Key:** The correct, or best, answer.
- Distractor:** An incorrect option.
- Options:** All the response choices in a question (includes key and distractors).

<b>EXAMPLE:</b>	Which of the following radiopharmaceuticals has the highest myocardial extraction fraction?
	<p>(A) Technetium-99m sestamibi <i>(distractor)</i></p> <p>(B) Technetium-99m pyrophosphate <i>(distractor)</i></p> <p>(C) <sup>123</sup>I-PPA <i>(distractor)</i></p> <p>*<i>(D)</i> Thallium-201 <i>(key)</i></p>

**The Examination Blueprint:** The examination “table of specifications”; the content areas of the exam, as well as their relative importance (identified by percentage).

**Classification:** Items are classified by the content area, domain or subdomain of the exam blueprint. Some items may fit into more than one area and have a secondary classification.

**Equators/Anchors:** Item administered in combination with two or more alternative forms of the test with the aim of establishing the equivalence of the test scores on the alternative forms. The purpose of the anchor test is to provide a baseline for an equating analysis between different forms of a test.

**Scored:** An item that "counts" toward the total score of the examinee.

**Unscored:** An item that is not counted toward the total score of the examinee. The item may be pilot tested or the performance statistics may be such that the item is not counted in the score.

**Exam Form:** A "version" of the exam. Multiple forms may be offered in any given administration of the exam.

**Subject Matter Experts (SMEs)** A person who is an expert in a particular topic or area. CBCCT and CBNC use this to describe the Volunteers who assist in the Exam Development processes.

**Item Status:** The state of an Item at any given time (e.g., Active, Retired, etc)

**Item Bank:** The entire set of Items owned by an exam program in all statuses, including Active, Retired, Sample items.

**Item Pool:** The set of Items available for selection for use on an exam form. Sometimes inaccurately used as a synonym for Item Bank.

<b><u>Congruence</u></b>	How the Item aligns to the test specifications in the blueprint classifications.
<b><u>Accuracy</u></b>	The medical and clinical "correctness" of an Item.
<b><u>P-Value:</u></b>	This is the percentage of examinees who correctly answered the question and informs as to how difficult the item is.
<b><u>Discrimination:</u></b>	The statistic that informs how well an item "discriminates" between high performing examinees and low performers. CBNC and CBCCT use a point-biserial correlation, which is an index of item discrimination used frequently in MCQ tests where an option is either correct (1) or incorrect (0).
<b><u>Reliability:</u></b>	The statistic that refers to the consistency of measurements when the testing procedure is repeated on a population of individuals or groups
<b><u>Validity:</u></b>	Evidence that the exam accurately and appropriately measures what it claims to measure. On a test with high validity the items will be closely linked to the test's intended focus.
<b><u>Fairness:</u></b>	Whether the exam is free from any kind of bias (e.g, practice or specialty based, geographic, demographic, gender, age, etc.)
<b><u>Legal Defensibility:</u></b>	Critical in a high stakes exam, the evidence of the exam's quality that would stand up to a court challenge – that development of the Items and the Exam Forms followed sound, professionally recommended guidelines throughout the processes.
<b><u>Psychometrics:</u></b>	<p>The field of study concerned with the theory and technique of psychological measurement, which includes the measurement of knowledge, abilities, attitudes, personality traits, and education. The field is primarily concerned with the construction and validation of measurement instruments such as questionnaires, tests, and personality assessments.</p> <p>It involves two major research tasks, namely: (i) the construction of instruments and procedures for measurement; and (ii) the development and refinement of theoretical approaches to measurement.</p>

**Beta Review:** Following Prometric receipt of the exam and programming by its technical staff, a beta review of each form by staff and SMEs takes place to assure that the image and questions have been correctly matched, that movies are running, with the appropriate frames per second, and any final correction is made. This is the last review before publication of the exam for examinees.

**Exam Delivery:** This is the delivery of the exams to candidates at testing centers.

**Flawed Items /Key Validation Review:** After the exam(s) have been delivered to examinees, performance statistics are analyzed by a test specialist (psychometrician). Any items with performance statistics outside the “normal” ranges (eg, p-value below .40; discrimination below .10; or where a distractor outperforms the key) are reviewed by a committee of SMEs to assure that the item was correctly keyed or otherwise correct. Following this review, items deemed “flawed” by this process are Retired (if scored) or Rejected if pilot tested.

**Scoring:** Following the Key Validation review, the final scores are applied and pass/fail information provided to staff to distribute to examinees. The performance statistics on p-value and point biserial correlation (discrimination) are added to the item data.

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## **Policy on Exposure/Compromise of Items**

### **Deliberate vs Incidental Reversioning**

Policy on what information should be documented

- Equators/Anchors (How do we deal with equators? Up/down/across)
- Form information
- Exam forms statistics
- Item statistics by form
- Reviewer/Committee Comments
- Decisions and Rationales
  - If so flawed everyone scored correct, should be retired
  - Should not double key. If at all flawed, give everyone credit.
- Reversioning (when is an item a new version)
- Anything from Standard Setting??

Are there any points where the board itself needs to review, or review decisions?

Add note about equators