CSDA-CSDP Item Writing Checklist

This is a "checklist" of the quality criteria that must be applied in authoring and reviewing items (i.e., "questions") for the CSDA and CSDP exams. This checklist applies in addition to whatever quality criteria checklist might be supplied by an exam management vendor (e.g., Prometric, PearsonVue, etc.).

For each individual item

- The item is at the appropriate skill/capability level (not too hard, not too easy) according to the exam specification—each item needs to be aimed at differentiating the qualified candidate from the unqualified candidate. Qualified candidates should have a high probability of answering the item correctly while unqualified candidates should have a high probability of answering it incorrectly.

- The item represents skill/knowledge that is needed on most software projects most of the time (i.e., the item tests for practical, useful skills and knowledge).

- The item cannot depend on geographically-specific knowledge (e.g., particular to North American or European law, government, culture, etc.). A qualified candidate from any country, region, or culture must be able to answer the item correctly.

- The item cannot be a "trick question." The exam is expected to be a test of the candidate's software engineering skill and knowledge, not the candidate's test-taking abilities.

- The item cannot require the candidate to perform math beyond addition, subtraction, multiplication, or division (e.g., no square roots, logarithms, exponentials, etc.). Candidates are not allowed to bring their own calculators, but should be supplied a 4-function calculator at the testing facility.

- The item cannot require an inordinate amount of time to solve. The CSDA and CSDP exams have 180 items and the candidate is given 180 minutes to complete it, meaning that the candidate has an average of only one minute to work on each item.

- No "Roman Numeral" (RN) items (i.e., items with elements in the stem "I, II, III, and IV" where the options are "I and II only," "II, III, and IV only," etc.) are allowed.

- No items depending on "except" or "not" (e.g., "Which of the following is NOT an accepted requirements elicitation technique" or "All of the following are accepted requirements elicitation techniques EXCEPT:").

- If an item has code, that code complies with the "CSDA/CSDP Coding Standard." (Available online: http://www.computer.org/portal/web/certification/resources)

- The item is properly referenced—for purposes of verifying the correctness of the item—down to the section or page level as appropriate—to at least one of the approved references on the current "Consolidated List of References": http://www.computer.org/portal/web/swebok/consolidated_reference_list

- The identified key (i.e., the identified correct answer) is consistent with the content in the approved reference.

- The item is properly categorized against the exam specification (i.e., it tests for knowledge relevant to that topic).

- All items must be written in reference to the third person ("a software professional"), not "you" or "a software engineer" (e.g., "A software professional needs to select an appropriate requirements elicitation technique, which of the following…" not "You need to select an appropriate requirements elicitation technique, which of the following…" or "A software engineer needs to select an appropriate requirements elicitation technique, which of the following…")

- If an item is testing for the same skill/knowledge as another item in the item base (e.g., "cyclomatic complexity"), then both items must include "Not on same form as <id of other item(s)>."

- If an item cues another item (i.e., the correct answer to another item can be derived from content in this item) then this item must include "Not on same form as <id of other item(s)>."

For the overall exam (set of items)

- The exam has an appropriate mix of Bloom's Taxonomy levels (e.g., there are not too many "recall" level items, and there are a sufficient number of "application" and "analysis" level items).

- Items that ask the same thing (e.g., "cyclomatic complexity"), even in different ways, do not appear. Each item on the exam must be testing a unique skill or knowledge.