

CSMS Exam Overview

Purpose

This document is intended as an overview of the background and policies surrounding the International Function Point Users Group (IFPUG) Certified Software Measurement Specialist (CSMS) Exam.

Overview

As the use of software measurement continues to grow, it is essential that individuals with a specialized level of knowledge and skills be recognized. The CSMS designation is a formal recognition of a level of expertise in the area of software measurement, specifically expertise in both knowledge and application of the rules according to the IFPUG Software Measurement Body of Knowledge (BoK).

The dictionary defines the word certify as: 1. a. To confirm formally as true, accurate, or genuine; testify to or vouch for in writing. b. To guarantee as meeting a standard; attest. In order to formally confirm this specialized level of expertise, IFPUG tasked the Management Reporting Committee (MRC) to develop and administer the CSMS Exam. This examination is the mechanism for qualifying that an individual to submit life experience documents to meet the requirements to qualify as a CSMS.

The exam is a test of the knowledge of the information in the current release of the. The exam consists of 75 multiple choice questions that test the general knowledge and definition and short problems in 6 topic areas. An individual must have at least 80 percent (a total of at least 60 out of 75) correct on the exam in order to submit the credit documentation to receive the CSMS designation.

The IFPUG guiding body of knowledge for developing the CSMS Exam is derived from six topic areas:

- Capability Maturity Model Integration®
- Practical Software Measurement
- Six Sigma
- Goal Question Metric / Goal-Driven Software Measurement
- IT Measurement & Benchmarking
- Balanced Scorecard

General areas of study that transcend specific listed topical areas include: benefits, motivations, and barriers to measurement, measurement program basics, continuous process improvement, quality basics, defects, estimating and analysis, basic statistics / usage / analysis, product size, productivity, functional size, project management, metrics, sustaining measurement, Balanced Scorecard, benchmarking, measurement usage in contracts, outsourcing, service levels, and customer satisfaction.

The IFPUG MRC is subject to rulings of the IFPUG Board of Directors, ensuring the integrity and credibility of the CSMS Exam.

Industry Value

As companies use software measurement more and more in their contracts, IFPUG, as the body who certifies an individual's capability, must ensure that the certified individual does indeed

have the required expertise. Therefore, ongoing renewal that includes active participation in the industry is required to maintain the current high status of the CSMS designation and to maintain IFPUG's reputation as the certifying body.

Exam Structure

The MRC established a target distribution by topic for the questions on the CSMS exam. The percents below indicate a limit to the percent of questions intended by topic area, not a minimum; therefore a summing to 100 percent is not intended. These percentages provide a reasonable distribution of topical areas to guide those preparing for the exam. The percentages are not a guarantee that the exam that any specific candidate receives contains these topics or these percents.

- Capability Maturity Model Integration® 45%
- Practical Software Measurement 25%
- Six Sigma 20%
- Goal Question Metric / Goal-Driven Software Measurement 15%
- IT Measurement & Benchmarking 15%
- Balanced Scorecard 10%

The exam is created in English, and is usually administered in English. However, bi-lingual CSMS will occasionally volunteer to work with the MRC to translate the exam to other languages.

As stated previously, the purpose of the exam is to test the candidate's knowledge and his/her ability to apply that knowledge. The purpose is not to test the candidate's English language skills. For that reason, a candidate may request a time extension for the exam (up to 15 minutes) if the exam is not available at that location in either his/her native language or in a language in which the candidate is competent. An individual can be considered competent in a language when he/she has the knowledge that enables him/her to speak and understand that language. Time extension requests must be made prior to the start of the exam, and are granted at the sole discretion of the proctor.

The successful CSMS candidate must have at least 80 percent (a total of at least 60 out of 75) correct on the exam. They are then eligible to submit documentation for CSMS certification.

After receiving a certificate, the exam must be taken again if: 1) the CSMS certification is allowed to expire or 2) a major release of the BoK is issued at which time the candidate would retest when their current period of certification expires. Candidates who do not pass may re-take the Exam at any time, provided at least 30 days have passed from the prior sitting.

Exam Feedback Policy

Feedback is provided to all candidates who sit for the Exam. For successful candidates the feedback is a letter from the IFPUG office indicating that the exam was passed and the candidate's documentation can be submitted for completion of the certification. For candidates who do not pass, the feedback is a letter from the IFPUG office plus the exam percentage.

The IFPUG MRC does not provide additional feedback to candidates, either topical or specific content. Key testing topics remain consistent from one exam version to the next. Also, some specific questions may be reused from one exam version to the next. There is the possibility that questions missed by a candidate on one exam may be on the next version of the exam. To review these questions with a candidate would provide an advantage over others taking the exam.

Helpful Hints

The following general and/or anecdotal observations may be helpful to candidates preparing for the exam:

- Successful CSMS candidates typically have read and studied the BoK.
- Check your answer sheet carefully before returning to the proctor. There have been instances where people have left questions with no answer marked or selected, which must be therefore be counted as an incorrect answer.
- Some people have made “flash cards” by reviewing the BoK and writing definitions, rules, etc. on index cards. They reviewed the “flash cards” whenever they had a few free moments – a break during a meeting, sitting in a traffic jam, waiting for the washing machine to finish the spin cycle. They indicated that this technique helped their confidence and recall, as well as their time management during the exam.
- There are several vendors who do provide CSMS Exam Preparation training. This training does not guarantee that an individual will pass the exam; however, past training participants have stated that it does better prepare them for the actual exam. This training is available at the IFPUG Workshops.
- Special care should be taken to completely read and follow all CSMS examination instructions. The Proctors can answer any questions about the instructions, where and how to show your work, etc.

These **Exam Day Rules** are read before every exam session, whether at a Conference, Workshop or regional location:

1. Failure to comply with the following instructions or instructions of the proctor may result in invalidation of your exam.
2. Please turn off all cell phones and pagers. Use of electronic devices is prohibited during the exam; however, non-programmable calculators are permitted.
3. **Talking to anyone other than the proctor is not permitted during the exam.**
4. All materials, including the answer sheet, exam booklet, and used scrap paper must be returned to the proctor and you must sign out at the end of the exam.
5. Please legibly print your name in the upper right hand corner of the exam booklet and on all pages of the answer sheet. You may write on the exam booklet.
6. Participants may use their own calculators and/or MRC-supplied quick reference cards. The proctor will ensure that only a calculator and/or MRC-supplied quick reference cards are used during the CSMS exam. The only exception to this is the use of language-translation dictionaries.
7. If English is not your first language you may use an English translation dictionary. You may request a time extension for the Exam (up to 15 minutes) if the exam is not in your native language and is not available in a language in which you are competent. Time extension requests must be made **before the exam begins**, and are granted at the sole discretion of the proctor.
8. The exam is ninety minutes with no scheduled breaks; if you need a break, just leave and return as soon as possible; we will announce time checks at the first hour and approximately every five minutes for the last 15 minutes of the exam.
9. Be sure that you have an answer for all multiple choice questions as blanks will be counted as wrong answers.
10. If you believe any questions or answer options are unclear, write a note *on the answer sheet*, clearly identifying to which question your note refers. ***Only notes on the answer sheet will be considered when scoring the exam.***
11. Raise your hand if you need any clarification; we will not assist in interpretation or provide any answers.
12. Upon completion of the exam, bring the answer sheet, exam booklet, and used scrap paper to the front of the room and sign the sign-out list. Your exam results will be withheld if you do not return all materials and sign out.
13. The exam consists of 75 questions. A successful exam will have at least 80 percent correct on the exam at one sitting. The exam scores will be published not later than four to six (4-6) weeks after receipt by the IFPUG office.