THE

SOFTWARE QUALITY ENGINEER

SOLUTIONS TEXT

5th Edition - January, 2016

SECTION II

GENERAL KNOWLEDGE - SAMPLE QUESTIONS

2.1. The benefits of software quality include:

   a. Satisfied customers, improved reliability, and reduced operating errors
   b. Increased customer demands and new customer requirements
   c. Reduced staff levels, and decreased verification efforts
   d. Process experimentation, capabilities, and extended process limits

Solution: This question requires knowledge of software quality benefits. Answers **b**, **c**, and **d** contain erroneous or illogical elements. The benefits of software quality to customers include satisfaction, reliability, and reduced errors among other positive results.

Answer a is correct.

Reference: *CSQE Primer*, Section II - 2/4.

2.2. The CMMI staged representation uses predefined sets of process areas to define an improvement path for an organization. This improvement path is characterized by:

   a. Improvement levels
   b. Capability levels
   c. Maturity levels
   d. Predefined levels

Solution: The staged representation of the CMMI uses maturity levels to define an improvement path for an organization.

Answer c is correct.

References: *CSQE Primer*, Section II - 47/49. CMMI-DEV. (2006, August). CMMI Product Development Team. *CMMI for Development, Version 1.2: Improving Processes for Better Products.*

2.3. The ASQ Code of Ethics represents important attributes for a successful software engineer. One article dealing with the software engineer's relationship with the public is centered around:

   a. Avoiding conflicts of interest and the appearance of conflicts of interest
   b. Performing services only in his/her areas of competence
   c. Acting in a professional manner with employers, customers, and clients
   d. Holding paramount the safety, health, and welfare of the public

Solution: Answers **a**, **b**, and **c** represent valid areas within ASQ's Code of Ethics. However, only item **d** deals with ASQ's Code of Ethics addressing the software professional's dealings with the public.

Answer d is correct.

Reference: *CSQE Primer*, Section II - 7/8.

GENERAL KNOWLEDGE - SAMPLE QUESTIONS

2.4. Many companies deploy specific tasks or methods to bridge cultural differences within the domestic and international markets. What is the primary method of resolving cultural differences?

    a. Allowing personnel to travel to diverse areas to learn cultural differences
    b. Identifying a person within the organization to coordinate efforts
    c. Designing programs to help bridge the gap
    d. Having top management educate personnel in cultural differences

Solution: Answers **a** and **b** are possible cultural gap stems but they are relatively limited in scope. Answer **d** could be important, but this selection, as well as **a** and **b**, could be included in answer **c**.

Answer c is correct.

Reference: *CSQE Primer*, Section II - 111/112.

2.5. Which standard provides a framework for how assessments of an organization's software processes should be performed?

    a. IEEE Standard 730
    b. IEEE Standard 1012
    c. ISO 9004
    d. ISO/IEC 15504

Solution: A framework of how assessments should be performed and reported can be found in ISO/IEEE 15504 (SPICE). The set of ISO 15504 standards is referred to as a reference model.

Answer d is correct.

Reference: *CSQE Primer*, Section II - 34/36 and 63/64.

GENERAL KNOWLEDGE - SAMPLE QUESTIONS

2.6.   The primary management challenge of a distributed workforce environment is the:

   a.   Time differences for the distributed work or the distributed workforce
   b.   Cultural differences associated with the distributed workforce
   c.   Salary differences to ensure equal employee treatment
   d.   Employee benefits for the distributed workforce

Solution: Answers **a**, **c**, and **d** may provide some management challenges for distributed work or workforce. Answer **b** provides the primary challenge for most managers dealing with distributed work environments.

Answer b is correct.

Reference: *CSQE Primer*, Section II - 125/127.

2.7.   Copyright law protects the literal form taken by expressive work. However, copyright law:

   a.   Protects the ideas but not the concepts underlying an expressive work
   b.   Does not protect the ideas and concepts underlying an expressive work
   c.   Protects the concepts but not the ideas underlying an expressive work
   d.   Protects the ideas and concepts in related patents

Solution: Copyright law does not protect the ideas and concepts underlying an expressive work.

Answer b is correct.

Reference: *CSQE Primer*, Section II - 13/16.

2.8.   In CMMI process areas, sub-practices, typical work products, amplifications, generic practice elaborations, practice notes, and references are examples of:

   a.   Descriptive model components
   b.   Required model components
   c.   Expected model components
   d.   Informative model components

Solution: Informative model components provide details about a selected process that helps organizations get started in thinking about how to approach the required and expected components. The question lists examples of informative model components.

Answer d is correct.

Reference: *CSQE Primer*, Section II - 39.

GENERAL KNOWLEDGE - SAMPLE QUESTIONS

2.9. Tacit knowledge is knowledge that is residing:

    a. In the minds of people, but not in a database
    b. In a corporate database, unknown to the public
    c. In a corporate library or database
    d. In the organizational memory

Solution: Tacit knowledge is knowledge that is residing in the minds of people; e.g., intuition, feelings, attitudes, etc., not in a database.

Answer a is correct.

Reference: *CSQE Primer*, Section II - 84.

2.10. Which of the following are typical action descriptions used in conflict resolutions?

    a. Divergent, differential, discrepancy, disparity
    b. Interpersonal, intrapersonal, intergroup, intragroup
    c. Accommodating, avoiding, collaborating, compromising
    d. Forming, storming, norming, performing

Solution: This question requires a review of conflict resolution terms. A positive response is requested. Answer **d** is clearly incorrect. This answer selection refers to the stages of problem solving team development. Answer **b** is also incorrect. It deals with group relationships not conflict resolution. Answer **a** contains terms that seem to relate to viewpoints. The terms in answer **c** are descriptive of conflict resolution.

Answer c is correct.

References: *CSQE Primer*, Section II - 95/96. See also Thomas K. (1995) The Handbook of Industrial and Organizational Psychology, Chicago: Rand McNally.