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**WITH A LITTLE HELP FROM MY FRIENDS.**

**JOHN LENNON/PAUL McCARTNEY**

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We would appreciate any comments regarding improvement and errata. It is our concern to be accurate.

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## SECTION II

### QUALITY CONCEPTS - TEST QUESTIONS

2.22. The advantage of a written procedure is:

- a. It provides flexibility in dealing with problems
- b. It handles unusual conditions much better
- c. It is a perpetual coordination device
- d. It minimizes coordination activities with other departments

Solution: A written procedure is a specified way to perform an activity. It tells what is to be done, by whom, and where. A work instruction expands the procedure to include how and when (the specific materials and equipment to be used; as well as how it is to be controlled and documented). Together they are ideal perpetual coordination devices, since everything is documented as to specifics.

**Answer c is correct.**

References: *CQIA Primer*, Section II - 29/32. This question has been modified from an old published CQE exam.

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2.23. A work instruction gives information about which of the following?

- a. The steps necessary to perform certain work
- b. Which specifications are not applicable
- c. The identity of the person who does the work
- d. The maximum set-up time

Solution: Work instructions may indicate which specifications are applicable, normal set-up information, and the steps necessary to perform certain work. The identity of the person who does the work is not included in the work instruction. A procedure will detail the "who" and "where" for an activity. Even so, the procedure will state that the assistant mill operator will take a sample every four hours at the rewind station. It will not say that Tom Jones will take the sample. Work instructions don't normally identify maximum set-up times or specifications that don't apply.

**Answer a is correct.**

Reference: *CQIA Primer*, Section II - 29/32.

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2.24. Individual training needs are most effectively developed when:

- a. They consider the difference between an individual's desired and current abilities
- b. They concentrate on middle management instruction to ensure their cooperation
- c. They are combined with incoming employee testing
- d. They focus on what an individual must achieve for advancement

Solution: The key phrase in this question is "most effectively developed." The weakest two answer selections are **b** and **c**. Both answers **a** and **d** deserve serious consideration. A close review of these two selections would indicate that answer **a** is the best choice. Answer **d** could be considered to be a subset of answer **a**.

**Answer a is correct.**

Reference: *CQIA Primer*, Section II - 23/24 and IX - 5 (general references only).

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## SECTION II

### QUALITY CONCEPTS - TEST QUESTIONS

2.25. Which can be factually made regarding the following improvement options?

- a. Changing company culture happens quickly
- b. Continuous process improvement is a never ending process
- c. Important quality projects take a long time to complete
- d. Quality improvement takes precedence over productivity improvements

Solution: The best answer choice is that continuous process improvement is never ending. An important quality project may have a specific ending. Changing company culture can be lengthy. Some productivity improvements may take precedence over quality improvements.

**Answer b is correct.**

Reference: *CQIA Primer*, Sections II, III, and IV.

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2.26. Quality training programs should be characterized by:

- a. An emphasis on real company quality problems
- b. A concentration on the special definitions in the quality control profession
- c. Strict compliance with written quality procedures
- d. Memorization of quality procedure requirements

Solution: Answers **b**, **c** and **d** are too restrictive in scope. Answer **a** is the best choice. Although this question is quality driven, most training efforts have greater success when they are directed towards real life applications and benefits.

**Answer a is correct.**

Reference: *CQIA Primer*, Section II - 22/24 and IX - 5.

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2.27. Dr. Deming and Dr. Nelson have described a form of contribution to variation called "just like the last." Where, within a company, would one be most likely to experience this phenomenon?

- a. In situations where barriers between departments exist
- b. In situations where worker trains worker, who trains worker
- c. Where business is awarded to the same supplier as in the previous year
- d. When more than 100% inspection is necessary to eliminate defects

Solution: The "just like the last" concept allows for a systematic, creeping form of variation. An excellent example is the last worker on a job training the next worker. An alternative to this approach is having the best worker or best instructor (with a checklist) do the training.

**Answer b is correct.**

Reference: *CQIA Primer*, Section II - 34.

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## SECTION II

### QUALITY CONCEPTS - TEST QUESTIONS

2.31. Identify the process output factors from the following incomplete lists:

- a. Products, services, designs
- b. Designs, needs, money
- c. Orders, ideas, data
- d. Specifications, services, money

Solution: Other question sources might provide a slightly different response. However, process outputs are often products, services, designs, training, root causes, etc. Process inputs include orders, money, specifications, data, ideas, needs, etc.

**Answer a is correct.**

Reference: *CQIA Primer*, Section II - 25 and 27.

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2.32. Enlightened organizations would be most likely to utilize which of the following techniques to empower their employees?

- a. Baldrige award participation
- b. Opinion surveys
- c. Quality of work life programs
- d. Approval and detection systems

Solution: Research has shown that team involvement and other quality of work life approaches will empower employees. Opinion surveys (which may not prompt any activity) is the weakest answer choice. Baldrige participation and detection systems are not as empowering as answer **c**.

**Answer c is correct.**

Reference: *CQIA Primer*, Section II - 20/24.

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2.33. Which of the following approaches has the highest empowerment impact?

- a. Understanding
- b. Awareness
- c. Ownership
- d. Commitment

Solution: There may be some slight disagreement to the terminology used in this question. Empowerment should evolve from awareness to ownership.

**Answer c is correct.**

Reference: *CQIA Primer*, Section II - 22.

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## SECTION II

### QUALITY CONCEPTS - TEST QUESTIONS

2.37. Which of the following job enrichment terms indicates that an employee can schedule his/her own work?

- a. Task skill variety
- b. Task identity
- c. Task autonomy
- d. Task significance

Solution: All of the answer choices are forms of job enrichment. However, the question content most closely tracks task autonomy. Answers **a** and **b** are secondary choices. Answer **d** (although important) is out of step with the question

**Answer c is correct.**

Reference: *CQIA Primer*, Section II - 24.

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2.38. A twenty year veteran of the paint dip line explained to a rookie that the only way to get consistent thickness is to adjust the speed based on the last piece checked. This technique will have what effect on process variation?

- a. Minimize it
- b. Reduce it
- c. No effect
- d. Increase it

Solution: The question scenario is a classic example of over correction, which will lead to increased (not decreased) variation.

**Answer d is correct.**

Reference: *CQIA Primer*, Section II - 34 and Section VIII - 49.

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2.39. The Nelson funnel experiment demonstrates that:

- a. Adjusting a stable process often increases variation
- b. No system can be made stable
- c. Management cannot affect system variation
- d. Workers can reduce common cause variation

Solution: Management, not workers, must address system (common cause) variation. Thus, answers **c** and **d** are incorrect. Some systems can be made relatively stable (answer **b** is incorrect). Adjustment to a stable process can increase variation by 40%, or so.

**Answer a is correct.**

Reference: *CQIA Primer*, Section II - 33/35.

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