

The Certified Quality Technician (CQT) Body of Knowledge (BoK) has been updated to ensure that the most current state of quality technician practice is being tested in the examination. If you would like more information on how a BoK is updated, see a description of the process on <a href="http://asq.org/cert/faq/create-body-of-knowledge">http://asq.org/cert/faq/create-body-of-knowledge</a>.

Part of the updating process is to conduct a job analysis survey to determine whether the topics in the 2018 BoK are still relevant to the job role of quality technicians and to identify any new topics that have emerged since that BoK was developed. The results of the CQT job analysis survey showed that most of the topics that were in the 2018 BoK are still relevant to the job roles of quality technicians. Six new areas were added to the 2024 BoK and four areas as well as parts of subtext were removed, as indicated in Table 2.

The 2024 Certified Quality Technician Body of Knowledge (CQT BoK) will be introduced at the **November 2024** administration. Both BoKs will be available online until January 1, 2025, at which time the 2018 BoK will be removed.

#### General comments about ASQ Body of Knowledge updates

When the Body of Knowledge (BoK) is updated for an ASQ exam, most of the material covered in the BoK remains the same. There are very few programs that change significantly over a 5-7 year period. One of the points that we make to all the exam development committees is that ASQ Certification Exams need to reflect "the state of practice" not "the state of the art." This helps to keep the programs grounded in what people currently do, rather than being driven by the latest hot-topic improvement idea or trend. Typically, the biggest change in any updated BoK is in how the content is organized. When a new BoK is announced and posted on the ASQ website, we also include a "BoK Map" that highlights the changes between the two Bodies of Knowledge: old and new. The BoK map also clearly identifies any new content that has been added to the exam, as well as any content that has been removed from the exam. With regard to exam preparation materials, you should be able to use any of the reference books that are currently listed on the bibliography for the exam program. These are the source materials that the exam development committees use to write questions and verify answers.

#### Specific comments about the 2024 CQT BoK updates

The CQT BoK mostly stayed the same with the 2024 update. In section I, one new subtopic was added, I.B.8 Problem solving techniques and one subtopic was removed I.B.9 Six Sigma. In section II, no new subtopics were added, but II.A.2 and II.A.3 were combined, Poisson, binomial, and frequency distribution were removed and normal curve was added. In section III, no new subtopics were added, and III.A.7 hardness testing was removed. Section IV, no new subtopics were added. Section V, no new subtopics were added and subtopic V.D. Audit Communication Tools was removed. Section VI, no new subtopics were added. There were several revisions made to the subtext including adding new pieces of knowledge. There was one subtopic that increased in cognitive level: 1.A.2 and two subtopics that decreased in cognitive level: II.C.3 and III.A.



Table 1 below portrays the change in items allocated to each section of the Body of Knowledge. The section names have remained the same. Table 2 on Page 3 presents the 2024 CQT BoK and maps the topics to the 2018 BoK, and Table 3 starting on Page 9 presents the 2018 CQT BoK and maps the topics to the 2024 BoK. Details on changes between the two can be found below.

| BoK Sections                   | 2018 BoK | 2024 BoK | Change |
|--------------------------------|----------|----------|--------|
| I. Quality Concepts and Tools  | 18       | 19       | +1     |
| II. Statistical Techniques     | 17       | 17       | 0      |
| III. Metrology and Calibration | 18       | 16       | -2     |
| IV. Inspection and Test        | 23       | 21       | -2     |
| V. Quality Audits              | 12       | 13       | +1     |
| VI. Risk Management            | 12       | 14       | +2     |

#### **Table 1. BoK Section Item Allocation**



#### Table 2. 2024 CQT BoK mapped to the 2018 CQT BoK

| 2018 BoK Code   | 2024 BoK Details   | Notes   |
|---|--|---|
|   | I. Quality Concepts and Tools [19 Questions]   | Number of questions changed from 18 to 19   |
|   | A. Quality Concepts  |   |
| I.A.1   | 1. Customers and suppliers<br>Define internal and external customers, identify their expectations, and determine their<br>satisfaction levels. Define internal and external suppliers and key elements of relations<br>with them. (Understand)   |   |
| I.A.2   | 2. Quality principles for products and processes<br>Explain basic quality principles related to products (e.g., features, fitness-for-use, and<br>freedom from defects) and processes (e.g., monitoring, measuring, and continuous<br>improvement). Confirm conformance to product or process specifications. Understand the<br>production part approval process (PPAP). (Apply) | Added confirming conformance and PPAP to<br>subtext. Increased cognitive level from<br>Understand to Apply. |
| I.A.3   | <b>3.</b> Quality standards, requirements, and specifications<br>Define and distinguish between national and international standards, quality management<br>systems, customer requirements, and product and process specifications. (Understand)   | Added quality management systems to subtext.  |
| I.A.4   | <b>4.</b> Cost of quality (COQ)<br>Describe and distinguish between the four classic cost of quality categories (i.e., prevention, appraisal, internal failure, and external failure) and classify activities appropriately. Understand and apply total cost of quality and cost of poor quality (COPQ). (Apply)   | Added total cost of quality and cost of poor quality to subtext.  |
|   | B. Quality Tools   |   |
| I.B.1, I.B.2, I.B.3,<br>I.B.4, I.B.5, I.B.6,<br>I.B.7 | <ol> <li>The seven basic quality tools         Select, construct, and interpret the seven basic quality tools: 1. cause and effect diagrams,         flowcharts (i.e., process maps), 3. check sheets, 4. Pareto charts, 5. scatter diagrams, 6. control charts, and 7. histograms. (Evaluate)     </li> </ol>   |   |
| I.B.8   | 8. Problem-solving techniques<br>Define, describe, and apply problem-solving techniques, such as 5 Whys and 8D. (Apply)  |   |
| I.B.10  | <b>9. Lean</b><br>Identify key concepts and tools such as 5S, value-stream mapping, and flow. (Remember)   | Removed "pull system" from subtext.   |
| I.B.9, I.B.11   | <b>10. Continuous improvement techniques</b><br>Define and use various continuous improvement techniques, including the plan-do-check-<br>act (PDCA) cycle, six sigma DMAIC (design, measure, analyze, improve, control),<br>brainstorming, and benchmarking. (Apply)  | Added six sigma DMAIC to subtext.   |



| 2018 BoK Code | 2024 BoK Details   | Notes  |
|---------------|--|--|
| I.C           | <b>C. ASQ Code of Ethics for Professional Conduct</b><br>Determine and apply appropriate behaviors and actions that comply with the ASQ Code of Ethics. (Evaluate)   | Revised wording of subtext.  |
|               | II. Statistical Techniques [17 Questions]  | Number of questions changed from 18 to 17  |
|               | A. General Concepts  |  |
| II.A.1        | <ol> <li>Terminology         Identify and explain statistical terms, such as population, sample, parameter, statistic, and statistical process control (SPC). (Understand)     </li> </ol>   | Minor revision to subtext.   |
| П.А.2 & П.А.3 | 2. Normal distributions<br>Define normal distribution and explain the area under the normal curve.<br>(Understand)   | Updated title of subtopic. Removed Poisson,<br>binomial and frequency distribution and<br>added normal curve to subtext. |
|               | B. Calculations  |  |
| II.B.1        | 1. Measures of central tendency<br>Define, compute, and interpret mean, median, and mode. (Analyze)  |  |
| II.B.2        | 2. Measures of dispersion<br>Define, compute, and interpret standard deviation, range, and variance. (Analyze)   |  |
| П.В.3         | 3. Confidence levels and limits<br>Explain confidence levels and confidence limits in various situations. (Understand)   | Subtopic renamed from "Confidence levels" to "Confidence levels and limits".   |
|               | C. Control Charts  |  |
| II.C.1        | <ol> <li>Control limits vs. specification limits         Identify and distinguish between the different uses of control limits and specification limits. (Analyze)     </li> </ol>   | Minor revision to subtext.   |
| II.C.2        | <ul> <li>Variables charts         Identify, construct, and interpret variables charts such as individual moving range (I-MR) chart, X              – R, and X             – s. (Analyze)      </li> </ul>  | Added individual moving range (I-MR) chart to subtext.   |
| II.C.3        | 3. Attributes charts<br>Explain and interpret attributes charts such as p, np, c, and u. (Understand)  | Minor revision to subtext to match change in cognitive level from Analyze to Understand.                                 |
| II.C.4        | <ul> <li>4. Process capability measures         Define the prerequisites for capability, calculate capability indices (e.g., C<sub>p</sub>, C<sub>pk</sub>, P<sub>p</sub>, and P<sub>pk</sub>), and draw conclusions from the results. (Analyze)     </li> </ul> | Removed capability ratio, added drawing conclusions from results to subtext.   |
| II.C.5        | <ul> <li>5. Common and special cause variation         Interpret various control chart patterns and trends. Use rules for determining statistical control to distinguish between common cause and special cause variation. (Analyze)     </li> </ul>             | Removed runs and hugging examples from subtext.  |



| 2018 BoK Code   | 2024 BoK Details   | Notes   |
|-----------------|--|---|
|                 | III. Metrology and Calibration [16 Questions]  | Number of questions changed from 18 to 16   |
|                 | A. Types of Measurement and Test Equipment (M&TE)<br>Describe the following types of M&TE. (Understand)  | Revised subtext to lower cognitive level from<br>Evaluate to Understand.  |
| III.A.1         | 1. Hand tools (e.g., calipers, micrometers, linear scales, analog, digital, vernier scales, and dial indicators)   | Added dial indicators to subtext.   |
| III.A.2         | 2. Gauges (e.g., pins, threads, custom gauges, and gauge blocks)   |   |
| III.A.3         | <b>3.</b> Optical tools (e.g., comparators, profiles, and microscopes)   |   |
| III.A.4         | 4. Coordinate measuring machines (CMMs) (e.g., touch probes, vision, and laser)  |   |
| III.A.5         | 5. Electronic measuring equipment (e.g., digital displays, and output)   |   |
| III.A.6         | 6. Weights, balances, and scales   |   |
| III.A.8         | 7. Surface plate methods and equipment   |   |
| Ш.А.9           | 8. Surface analyzers (e.g., profilometers)   | Removed roughness reference standards example.  |
| <b>III.A.10</b> | 9. Force measurement tools (e.g., torque wrenches and tensometers)   |   |
|                 | B. Control and Maintenance of M&TE   |   |
| III.B.1         | 1. M&TE identification, control, and maintenance<br>Describe various methodologies for identifying and controlling M&TE to meet<br>traceability requirements and apply appropriate techniques for maintaining such<br>equipment to obtain optimum performance. (Apply)   |   |
| III.B.2         | 2. Customer-supplied M&TE<br>Describe and apply requirements for validation and control of customer-supplied<br>equipment. (Apply)   |   |
|                 | C. Calibration of M&TE   |   |
| Ш.С.1           | 1. Calibration intervals<br>Apply calibration schedules based on M&TE usage history and risk. (Apply)  | Minor revision to subtext.  |
| III.C.2         | 2. Calibration results<br>Interpret calibration results and the potential impact of using out-of-calibration tools<br>or failing to calibrate equipment on a regular basis. Recognize the need to adjust<br>calibration schedules based on calibration data, records, history, and reliability, and<br>document results. (Analyze) | Added adjusting calibration schedules based<br>on data, records, history, and reliability and<br>added document results to subtext. |
| Ш.С.3           | 3. Calibration error<br>Identify the causes of calibration error and its effect on processes and products.<br>(Understand)   |   |



| 2018 BoK Code | 2024 BoK Details   | Notes  |
|---------------|--|--|
| III.C.4       | <b>4. Hierarchy of standards</b><br>Explain the levels of standards (e.g., reference, primary, and transfer) and their<br>relationship to one another. (Apply)   |  |
|               | IV. Inspection and Test [21 Questions]   | Number of questions changed from 23 to 21                    |
|               | A. Reading and Interpreting Drawings   | Revised title.   |
| IV.A.1        | <ol> <li>Drawing symbols and components         Interpret drawings and apply requirements in various test and inspection activities.         (Analyze)     </li> </ol>   | Revised title.   |
| IV.A.2        | <ol> <li>Geometric dimensioning and tolerancing (GD&amp;T)<br/>Define and apply GD&amp;T covered in the ASME Y14.5 standard. (Analyze)</li> </ol>  |  |
| IV.A.3        | <b>3.</b> Classification of product defect characteristics and symbols<br>Define and distinguish between product defect characteristics (e.g., critical, major,<br>and minor) and characteristic symbols (e.g., significant, and critical). (Analyze)  | Added symbols to title and subtext.                          |
|               | B. Inspection Concepts   |  |
| IV.B.1        | <ol> <li>Types of measurements         Define and select between direct, differential, derived, and transfer measurements.         (Understand)     </li> </ol>  | Added derived to subtext.                                    |
| IV.B.2        | 2. Gauge selection<br>Determine which measurement instrument to use considering factors such as<br>resolution, accuracy, tolerance, environment, and product features. (Evaluate)  |  |
| IV.B.3        | <b>3.</b> Measurement system analysis (MSA)<br>Define and distinguish between measurement terms such as correlation, bias,<br>linearity, precision-to-tolerance, attribute, variable and percent agreement. Describe<br>how gauge repeatability and reproducibility (R&R) studies are performed and how<br>they are applied in support of MSA. (Analyze) | Added attribute and variable to subtext.                     |
| IV.B.4        | <b>4. Rounding rules</b><br>Use truncation, rounding rules, significant digits, and significant figures on both positive and negative numbers. (Apply)   | Added significant digits and significant figures to subtext. |
| IV.B.5        | 5. Conversion of measurements<br>Convert between metric and English units. (Apply)   |  |
| IV.B.6        | 6. Inspection points<br>Define and distinguish between inspection point functions (e.g., receiving, in-<br>process, final, source, and first-article). Determine what type of inspection is<br>appropriate at different stages of production, from raw materials through finished<br>product. (Analyze)  |  |



| 2018 BoK Code                               | 2024 BoK Details   | Notes   |
|---|--|---|
| IV.B.7                                      | 7. Inspection error<br>Explain various types of inspection error, including operator error (e.g., parallax, and fatigue), environment (e.g., vibration, humidity, and temperature), and equipment (e.g., limitations, capability, and setup). (Understand) |   |
| IV.B.8                                      | 8. Product traceability<br>Explain the requirements for documenting and preserving the identity of a product<br>and its origins. (Apply)   |   |
| IV.B.9                                      | <ol> <li>Certificates of compliance (CoC) and analysis (CoA)</li> <li>Define and compare these two types of certificates. (Understand)</li> </ol>  |   |
|   | C. Sampling  |   |
| IV.D.1                                      | <ol> <li>Sampling characteristics         Identify and define sampling characteristics such as lot size, sample size, acceptance number, and switching rules. (Apply)     </li> </ol>  | Removed operational operating (OC) curve from subtext.  |
| IV.D.2                                      | 2. Sampling types<br>Define and distinguish between sampling types such as fixed single, double, skip lot,<br>100% inspection, attributes, variables, acceptance, parts per million (PPM), and<br>average outgoing quality (AOQ). (Apply)                  | Added "acceptance sampling, parts per<br>million (PPM), and average outgoing quality<br>(AOQ) to subtext. |
| IV.D.3                                      | 3. Selecting samples from lots<br>Determine sample size (e.g., AQL), selection method and accept/reject criteria used<br>in various situations. (Apply)  |   |
|   | D. Nonconforming Material  |   |
| IV.E.1                                      | <ol> <li>Identifying and segregating<br/>Determine whether products and material meet conformance requirements. Use<br/>various methods to label, segregate and document nonconforming material.<br/>(Evaluate)</li> </ol>                                 | Minor revision to subtext.  |
| IV.E.2                                      | 2. Material review process<br>Explain various elements of this process, such as the function of the material review<br>board (MRB), the steps in determining fitness-for-use, and product disposition.<br>(Understand)                                     |   |
|   | V. Quality Audits [13 Questions]   | Change in the number of questions from 12 to 13   |
| V.A.1, V.A.2, V.A.3,<br>V.A.4, V.A.5, V.A.6 | <ul> <li>A. Audit Types and Terminology</li> <li>Define basic audit types: 1. internal, 2. external, 3. systems, 4. product, 5. process,</li> <li>6. virtual, and 7. distinguish between first-, second-, and third-party audits. (Understand)</li> </ul>  | Added virtual audits to subtext.  |



| 2018 BoK Code                               | 2024 BoK Details   | Notes   |
|---|--|---|
| V.B.1, V.B.2, V.B.3,<br>V.B.4, V.B.5, V.B.6 | <ul> <li>B. Audit Components</li> <li>Describe and apply various elements of the audit process: 1. audit purpose and scope,</li> <li>2. audit reference standards, 3. audit plan (preparation), 4. audit performance, 5. opening and closing meetings, 6. grading / classifying audit findings (e.g., major, minor, and observational), and 7. final report and verification of corrective action. (Apply)</li> </ul>  | Added grading / classifying audit findings<br>(e.g., major, minor, and observational) to<br>subtext.  |
| V.C.1, V.C.2, V.C.3,<br>V.C.4               | C. Audit Tools and Techniques<br>Define and apply various auditing tools: 1. checklists and working papers, 2. data gathering and<br>objective evidence, 3. forward- and backward-tracing, 4. audit sampling plans and procedural<br>guidelines. (Apply)   |   |
|   | VI. Risk Management [14 Questions]   | Number of questions changed from 12 to 14   |
| VI.A  | A. Risk Assessment and Mitigation<br>Describe methods of risk assessment and mitigation such as trend analysis (SPC), failure mode<br>and effects analyses (e.g., PFMEA and DFMEA), root cause analysis (RCA), product and<br>process monitoring reports, inputs for risk assessment (e.g., customer complaints and field /<br>warranty returns), and control plans. (Understand)  | Added PFMEA and DFMEA as examples of<br>failure mode and effects analysis and added<br>inputs for risk assessment (e.g., customer<br>complaints, and field/warranty returns) to<br>subtext. |
| VI.B  | <b>B.</b> Corrective Action<br>Explain and apply elements of the corrective action process, including: identify the problem, contain the problem (interim action), assign responsibility (personnel) to determine the causes of the problem and propose solutions to eliminate it or prevent its recurrence (permanent action), verify that the solutions are implemented, and confirm their effectiveness (validation). (Apply)                               |   |
| VI.C  | <b>C. Preventive Action</b><br>Explain and apply elements of the preventive action process, select data analysis techniques to identify potential failures, defects, and process deficiencies, assign responsibility for improving the process (e.g., develop error- and mistake-proofing devices and methods, initiate procedural changes, evaluate lessons learned, and conduct read across), and verify the effectiveness of the preventive action. (Apply) | Added lessons learned, and read across to subtext.  |



#### Table 3. 2018 CQT BoK mapped to the 2024 CQT BoK

| 2018 BoK |   | 2018 BoK 2024 BoK |   | Notas  |
|----------|---|-------------------|---|--|
| Number   | Label   | Number            | Label   | Notes  |
| I.       | Quality Concepts and Tools                          | I.                | Quality Concepts and Tools                          | Increase number of questions from 18 to 19   |
| I.A      | Quality Concepts                                    | I.A               | Quality Concepts                                    |  |
| I.A.1    | Customers and suppliers                             | I.A.1             | Customers and suppliers                             |  |
| I.A.2    | Quality principles for products and processes       | I.A.2             | Quality principles for products and processes       | Added confirm conformance to product or process<br>specifications and production part approval process (PPAP)<br>and increased cognitive level from Understand to Apply. |
| I.A.3    | Quality standards, requirements, and specifications | I.A.3             | Quality standards, requirements, and specifications | Added quality management systems.  |
| I.A.4    | Cost of quality                                     | I.A.4             | Cost of quality                                     | Added total cost of quality and cost of poor quality (COPQ).   |
| I.B.     | Quality Tools                                       | I.B.              | Quality Tools                                       |  |
| I.B.1    | Cause and effect diagrams                           | I.B.1             | Cause and effect diagrams                           |  |
| I.B.2    | Flowcharts  | I.B.2             | Flowcharts  |  |
| I.B.3    | Check sheets  | I.B.3             | Check sheets  |  |
| I.B.4    | Pareto charts                                       | I.B.4             | Pareto charts                                       |  |
| I.B.5    | Scatter diagrams                                    | I.B.5             | Scatter diagrams                                    |  |
| I.B.6    | Control charts                                      | I.B.6             | Control charts                                      |  |
| I.B.7    | Histograms  | I.B.7             | Histograms  |  |
| I.B.8    | Problem solving techniques                          | I.B.8             | Problem solving techniques                          |  |



| 2018 BoK |  | 2018 ВоК 2024 ВоК |   |   |
|----------|--|-------------------|---|---|
| Number   | Label  | Number            | Label                                       | Notes   |
| I.B.9    | Six Sigma                                      | I.B.9             | Lean  | Removed Six Sigma, quality function deployment (QFD),<br>design of experiments (DOE), and design, measure,<br>improve, control (DMAIC). |
| I.B.10   | Continuous improvement techniques              | I.B.10            | Continuous improvement techniques           | Added Six Sigma and design, measure, analyze, improve, control (DMAIC).   |
| I.C      | ASQ Code of Ethics for<br>Professional Conduct | I.C               | ASQ Code of Ethics for Professional Conduct | Minor revision to subtext.  |
| II.      | Statistical Techniques                         | II.               | Statistical Techniques                      |   |
| II.A.    | General Concepts                               | II.A.             | General Concepts                            |   |
| II.A.1   | Terminology                                    | II.A.1            | Terminology                                 |   |
| II.A.2   | Frequency Distribution                         | II.A.2            | Normal Distribution                         | Revised title to Normal Distribution, removed Poisson and<br>binomial frequency distributions and added normal curve.                   |
| II.B     | Calculations                                   | II.B              | Calculations                                |   |
| II.B.1   | Measures of central tendency                   | II.B.1            | Measures of central tendency                |   |
| II.B.2   | Measures of dispersion                         | II.B.2            | Measures of dispersion                      |   |
| II.B.3   | Confidence levels                              | II.B.3            | Confidence levels and limits                | Changed title to Confidence levels and limits.  |
| II.B.4   | Confidence limits                              |                   |   | Combined with II.B.3  |
| II.B.5   | Probability                                    |                   |   | Removed from BoK  |
| II.C     | Control Charts                                 | II.C              | Control Charts                              |   |
| II.C.1   | Control limits vs. specification limits        | II.C.1            | Control limits vs. specification limits     |   |
| II.C.2   | Variables charts                               | II.C.2            | Variables charts                            | Added individual moving range (I-MR) chart.   |
| П.С.3    | Attributes charts                              | II.C.3            | Attributes charts                           | Revised wording of subtext and changed cognitive level from Analyze to Understand.  |



| 2018 BoK |   | 2024 BoK |   | Notes  |
|----------|---|----------|---|--|
| Number   | Label   | Number   | Label   | INOLES   |
| II.C.4   | Process capability measures                       | II.C.4   | Process capability measures                       | Removed capability ratio $(C_R)$ and added drawing conclusions to subtext. |
| II.C.5   | Common and special cause variation                | II.C.5   | Common and special cause variation                | Removed runs and hugging from examples in subtext.                         |
| II.C.6   | Data plotting                                     |          |   | Removed from BoK   |
| III.     | Metrology and Calibration                         | III.     | Metrology and Calibration                         | Decreased number of questions from 18 to 16                                |
| III.A    | Types of Measurement and Test<br>Equipment (M&TE) | III.A    | Types of Measurement and Test Equipment<br>(M&TE) | Revised subtext and changed cognitive level from Evaluate to Understand.   |
| III.A.1  | Hand tools  | III.A.1  | Hand tools  | Added dial indicator as an example.  |
| III.A.2  | Gauges  | III.A.2  | Gauges  | Revised gage to gauge.   |
| III.A.3  | Optical tools                                     | III.A.3  | Optical tools                                     |  |
| III.A.4  | Coordinate measure machines<br>(CMMs)             | III.A.4  | Coordinate measure machines (CMMs)                |  |
| III.A.5  | Electronic measuring equipment                    | III.A.5  | Electronic measuring equipment                    |  |
| III.A.6  | Wights, balances, and scales                      | III.A.6  | Wights, balances, and scales                      |  |
| III.A.7  | Hardness testing equipment                        |          |   | Removed from BoK   |
| III.A.8  | Surface plate methods and equipment               | III.A.7  | Surface plate methods and equipment               |  |
| III.A.9  | Surface analyzers                                 | III.A.8  | Surface analyzers                                 |  |
| III.A.10 | Force measurement tools                           | III.A.9  | Force measurement tools                           |  |
| III.A.11 | Angle measurement tools                           |          |   | Removed from BoK   |
| III.A.12 | Color measurement tools                           |          |   | Removed from BoK   |



| 2018 BoK |  | 2018 ВоК 2024 ВоК |  | NI-4  |
|----------|--|-------------------|--|---|
| Number   | Label  | Number            | Label  | Notes   |
| III.A.13 | Automated in line inspection methods             |                   |  | Removed from BoK  |
| III.B    | Control and Maintenance of M&TE                  | III.B             | Control and Maintenance of M&TE                              |   |
| III.B.1  | M&TE identification, control, and maintenance    | III.B.1           | M&TE identification, control, and maintenance                |   |
| III.B.2  | Customer-supplied M&TE                           | III.B.2           | Customer-supplied M&TE                                       |   |
| III.C    | Calibration of M&TE                              | III.C             | Calibration of M&TE  |   |
| III.C.1  | Calibration intervals                            | III.C.1           | Calibration intervals  |   |
| III.C.2  | Calibration results                              | III.C.2           | Calibration results  | Added adjusting calibration schedules.                              |
| III.C.3  | Calibration errors                               | III.C.3           | Calibration errors   |   |
| III.C.4  | Hierarchy of standards                           | III.C.4           | Hierarchy of standards                                       |   |
| IV.      | Inspection and Test                              | IV.               | Inspection and Test  | Decreased number of questions from 23 to 21.                        |
| IV.A     | Blueprint Reading and Interpreting<br>Drawings   | IV.A              | Reading and Interpreting Drawings                            | Changed blueprint reading to reading.                               |
| IV.A.1   | Blueprint drawings symbols and components        | IV.A.1            | Blueprint drawings symbols and components                    | Changed blueprint reading' to reading.                              |
| IV.A.2   | Geometric dimensioning and tolerancing (GD&T)    | IV.A.2            | Geometric dimensioning and tolerancing (GD&T)                |   |
| IV.A.3   | Classification of product defect characteristics | IV.A.3            | Classification of product defect characteristics and symbols | Added symbols to title and added characteristic symbols to subtext. |
| IV.B     | Inspection Concepts                              | IV.B              | Inspection Concepts  |   |
| IV.B.1   | Types of measurement                             | IV.B.1            | Types of measurement   | Added derived to subtext.   |
| IV.B.2   | Gauge selection                                  | IV.B.2            | Gauge selection  |   |



| 2018 BoK |  | 8 BoK 2024 BoK |   | NTadara  |
|----------|--|----------------|---|--|
| Number   | Label  | Number         | Label   | Notes  |
| IV.B.3   | Measurement systems analysis<br>(MSA)                  | IV.B.3         | Measurement systems analysis (MSA)                  | Added attribute and variable to subtext.   |
| IV.B.4   | Rounding rules   | IV.B.4         | Rounding rules                                      | Added significant digits and significant figures to subtext.                             |
| IV.B.5   | Conversion of measurements                             | IV.B.5         | Conversion of measurements                          |  |
| IV.B.6   | Inspection points                                      | IV.B.6         | Inspection points                                   |  |
| IV.B.7   | Inspection error                                       | IV.B.7         | Inspection error                                    |  |
| IV.B.8   | Product traceability                                   | IV.B.8         | Product traceability                                |  |
| IV.B.9   | Certificates of compliance (CoC)<br>and analysis (CoA) | IV.B.9         | Certificates of compliance (CoC) and analysis (CoA) |  |
| IV.C     | Inspection Techniques and<br>Processes                 |                |   | Removed from BoK   |
| IV.C.1   | Nondestructive testing (NDT)<br>techniques             |                |   | Removed from BoK   |
| IV.C.2   | Destructive testing techniques                         |                |   | Removed from BoK   |
| IV.C.3   | Other testing techniques                               |                |   | Removed from BoK   |
| IV.D     | Sampling   | IV.C           | Sampling  |  |
| IV.D.1   | Sampling characteristics                               | IV.C.1         | Sampling characteristics                            | Removed operating characteristic (OC) curve from subtext.                                |
| IV.D.2   | Sampling types   | IV.C.2         | Sampling types                                      | Added acceptance, parts per million (PPM) and average outgoing quality (AOQ) to subtext. |
| IV.D.3   | Selecting samples from lots                            | IV.C.3         | Selecting samples from lots                         |  |
| IV.E     | Nonconforming Material                                 | IV.D           | Nonconforming Material                              |  |
| IV.E.1   | Identifying and segregating                            | IV.D.1         | Identifying and segregating                         | Added documenting nonconforming material to subtext.                                     |
| IV.E.2   | Material review process                                | IV.D.2         | Material review process                             |  |



| 2018 BoK |  | 2024 BoK |   | Neter  |
|----------|--|----------|---|--|
| Number   | Label  | Number   | Label   | Notes  |
| v.       | Quality Audits   | V.       | Quality Audits  | Increased number of questions from 12 to 13. |
| V.A      | Audit Types and Terminology                                    | V.A      | Audit Types and Terminology                                     |  |
| V.A.1    | Internal   | V.A.1    | Internal  |  |
| V.A.2    | External   | V.A.2    | External  |  |
| V.A.3    | Systems  | V.A.3    | Systems   |  |
| V.A.4    | Product  | V.A.4    | Product   |  |
| V.A.5    | Process  | V.A.5    | Process   |  |
| V.A.6    | Distinguish between first-, second-,<br>and third-party audits | V.A.6    | Virtual   | Added Virtual audits.                        |
|          |  | V.A.7    | Distinguish between first-, second-, and third-<br>party audits |  |
| V.B      | Audit Components   | V.B      | Audit Components  |  |
| V.B.1    | Audit purpose and scope  | V.B.1    | Audit purpose and scope   |  |
| V.B.2    | Audit reference standards                                      | V.B.2    | Audit reference standards                                       |  |
| V.B.3    | Audit plan (preparation)                                       | V.B.3    | Audit plan (preparation)  |  |
| V.B.4    | Audit performance  | V.B.4    | Audit performance   |  |
| V.B.5    | Opening and closing  | V.B.5    | Opening and closing   |  |
| V.B.6    | Final report and verification of corrective action             | V.B.6    | Grading / classifying audit findings                            | Added Grading / classifying audit findings.  |
|          |  | V.B.7    | Final report and verification of corrective action              |  |
| V.C      | Audit Tools and Techniques                                     | V.C      | Audit Tools and Techniques                                      |  |



| 2018 BoK |  | 2024 BoK |  | Natar  |
|----------|--|----------|--|--|
| Number   | Label  | Number   | Label  | Notes  |
| V.C.1    | Checklists and working papers                  | V.C.1    | Checklists and working papers                  |  |
| V.C.1    | Data gathering and objective evidence          | V.C.1    | Data gathering and objective evidence          |  |
| V.C.1    | Forward- and backward-tracing                  | V.C.1    | Forward- and backward-tracing                  |  |
| V.C.1    | Audit sampling plans and procedural guidelines | V.C.1    | Audit sampling plans and procedural guidelines |  |
| V.D      | Audit Communication Tools                      |          |  | Removed from BoK   |
| VI.      | Risk Management                                | VI.      | Risk Management                                | Increased number of questions from 12 to 14.                                       |
| VI.A     | Risk Assessment and Mitigation                 | VI.A     | Risk Assessment and Mitigation                 | Added PFMEA and DFMEA as examples and added inputs for risk assessment to subtext. |
| VI.B     | Corrective Action                              | VI.B     | Corrective Action                              |  |
| VI.C     | Preventive Action                              | VI.C     | Preventive Action                              | Added evaluation lessons learned and conducting read across to subtext.            |