



ISA CCST Task List Reference Document for 2013 Exam Change

CCST Domains (as of 1 July 2013)

1. Calibration, Maintenance, Repair, Troubleshooting
2. Project Start-up, Commissioning, Loop-check, Project Organization, Planning
3. Documentation
4. Administration, Supervision, Management

CCST Domains by Level (as of 1 July 2013)

Task	Average Percent of Exam Questions		
	Level I	Level II	Level III
Domain 1: Calibration, Maintenance, Repair, Troubleshooting	77%	61%	19%
Domain 2: Project Start-up, Commissioning, Loop-check, Project Organization, Planning	16%	23%	14%
Domain 3: Documentation	7%	10%	10%
Domain 4: Administration, Supervision, Management	N/A	6%	57%

CCST Task Descriptions and Level Specification (as of 1 July 2013)

Code	Task	Level 1	Level 2	Level 3
Total Number of Tasks		17	23	27
0100	Calibration, maintenance, repair, trouble-shooting			
0101	Calibrate a device using appropriate test standards, recommended procedures, and manufacturer's specifications on instrument data sheets in order to record "as-found" readings, evaluate "as-found" readings against specified tolerance, make calibration adjustments as required, and record "as-left" data.	X	X	X
0102	Safely assess the condition of a device through inspection, testing, and documentation review in order to make adjustments to maintain device performance and accuracy and determine the need for any repairs.	X	X	X
0103	Apply preventative, predictive, and corrective maintenance methods for instruments and devices in order to minimize device failures and process downtime.	X	X	
0104	Examine all pertinent documentation to determine which device(s) of the control loop could be causing observed discrepancies in order to prepare a plan of corrective action.	X	X	
0105	Identify the correct device to be calibrated through documentation and instrument identification systems in order to facilitate proper calibration.	X	X	
0106	Obtain applicable documents required to perform device calibration, testing, troubleshooting, or maintenance and review documents for accuracy and completeness.	X	X	
0107	Perform repairs on instruments and devices by following proper industry protocol, appropriate safety and operating procedures, and manufacturer's recommendations in order to return the device to service.	X	X	
0108	Prepare for removal and decontamination of device from operational service by reviewing the MSDS, appropriate PPE, and safety procedures.	X	X	
0109	Select the correct testing equipment by using existing documentation, appropriate calibration procedures, and visual inspection in order to calibrate the device.	X	X	
0110	Use documentation and field inspection to verify that appropriate utilities and equipment are available and operational in order to safely and effectively perform device testing.	X	X	
0111	Apply the proper fittings, terminations, and electrical barriers for instruments and devices, utilizing the correct procedures in accordance with local regulatory codes and standards to maintain safety in hazardous environments.	X		
0112	Isolate a process component from an operational system by following maintenance documentation and appropriate safety and operating procedures in order to perform testing or maintenance.	X		
0113	Use appropriate testing equipment to measure and detect electrical and/or electronic properties to ensure proper loop installation and performance.	X	X	
0114	Demonstrate a thorough understanding of multi-step troubleshooting methodology while safely performing testing of equipment or processes.		X	

Code	Task	Level 1	Level 2	Level 3
	Total Number of Tasks	17	23	27
0115	Evaluate control system tuning by observing system response to changes in controller parameters. Adjust PID tuning parameters as required to provide proper system response.		X	
0116	Isolate a process component from an operational system by following maintenance documentation and appropriate safety and operating procedures in order to perform testing, maintenance, or troubleshooting.		X	
0117	Evaluate installed industrial network data and performance using network diagnostic tools.		X	
0118	Analyze electrical circuits using appropriate testing equipment to ensure proper loop installation and performance.			X
0119	Examine all pertinent documentation to determine which device(s) of the control system could be causing observed discrepancies in order to prepare and coordinate a plan of corrective action.			X
0200	Project start-up, commissioning, loop-check, project organization, planning			
0201	Field verify the as-built condition of the installed control system through visual observation and comparison with applicable project documentation. Redline documentation as needed in order to provide information for further verification and update by engineering/maintenance to maintain accurate instrumentation records.	X	X	
0202	Inspect the loop components through visual observation in order to verify that the components are correctly installed in accordance with applicable documentation to ensure safe and efficient device operation.	X	X	
0203	Verify proper loop functionality by simulating a controller's measured variable value using appropriate simulation equipment.	X	X	
0204	Assist site personnel during start-up to identify and correct problems that may arise during the commissioning of control systems.		X	X
0205	Verify final control element functionality by changing the values of the manipulated variables using the controller mode and output functions.		X	
0206	Examine all pertinent documentation in order to identify the proper operation of a control system and devices to provide a baseline against which to evaluate any problems.			X
0207	Inspect the control system components through visual observation in order to verify that the components are correctly installed in accordance with applicable documentation to ensure safe and efficient device operation.			X
0300	Documentation			
0301	Document calibration, maintenance, troubleshooting, and repair using appropriate forms, calibration labels, and/or electronic records to provide permanent record of changes and device history.	X	X	
0302	Demonstrate a thorough understanding of system documentation and symbology to effectively troubleshoot instrumentation, control loops, and electrical and pneumatic		X	

Code	Task	Level 1	Level 2	Level 3
	Total Number of Tasks	17	23	27
	installations.			
0303	Collect, organize, and maintain industrial network data and manage information to ensure system integrity and optimize network performance.			X
0304	Assemble and examine all appropriate documents in order to verify completion of a project and to establish device records during all phases of a project.			X
0305	Generate as-built drawings and verify redlined documentation in order to provide accurate and current drawings for final approval.			X
0400	Administration, supervision, management			
0401	Identify electrical classification or other hazards in an area, and determine appropriate procedures to be followed for safe and effective operation in that area.		X	X
0402	Administer work orders and instrument identification systems (e.g., tags, stickers) in order to facilitate proper calibration, repair, and maintenance.			X
0403	Coordinate repairs on instruments and devices by ensuring that proper industry protocols and manufacturer's procedures or recommendations are followed in order to return the device to service.			X
0404	Coordinate the removal and decontamination of a device from operational service by reviewing the MSDS, appropriate PPE, and safety procedures.			X
0405	Develop and coordinate with all affected personnel the isolation of a process component from an operational system by reviewing maintenance documentation and appropriate safety and operation procedures in order to perform testing or maintenance.			X
0406	Develop and implement tracking system for the receipt, storage, and issuing of instruments onsite in order to control resources.			X
0407	Develop preventative, predictive, and corrective maintenance procedures for instruments and devices in order to minimize device failures and process downtime.			X
0408	Develop procedures for the use of simulation and test equipment to verify proper loop functionality, calibration, and maintenance.			X
0409	Develop, review, and maintain calibration, maintenance, troubleshooting, and repair documents to provide a permanent, accurate, and complete record of change and device history.			X
0410	Ensure that all documents are complete and accurate and comply with recommended procedures and job specifications.			X
0411	Ensure that applicable safety practices are followed and that personnel are informed of possible hazards while performing assigned tasks.			X
0412	Monitor related project costs, schedules, and resources to identify deviations from a project plan.			X

Code	Task	Level 1	Level 2	Level 3
	Total Number of Tasks	17	23	27
0413	Organize, review, and verify project documents (e.g., calibration and data sheets, loop drawings, P&IDs, IOM manuals, instrument location, and installation details) in order to maintain compliance with project specifications.			X
0414	Participate in control project planning in order to coordinate project resources and personnel, and ensure that all affected personnel are aware of their responsibilities.			X
0415	Update and maintain certified testing equipment, documentation, recommended procedures, and out-of-tolerance reporting to facilitate the operation of instruments and devices necessary for safety and quality assurance.			X
0416	Use product quality and process data to evaluate control system performance and make recommendations to optimize process efficiency, reliability, and safety.			X
0417	Verify that training and certifications of personnel (staff and contracted) are current and appropriately filed in compliance with procedures.			X

CCST Level I

CCST Level I Performance Domains and Test Specifications

(as of 1 July 2013)

Task by Domain	Average Percent of Exam Questions
Domain 1: Calibration, Maintenance, Repair, Troubleshooting	77% Total
101	7%
102	7%
103	7%
104	2%
105	7%
106	2%
107	7%
108	7%
109	7%
110	7%
111	7%
112	8%
113	2%
Domain 2: Project Start-up, Commissioning, Loop-check, Project Organization, Planning	16% Total
201	2%
202	7%
203	7%
Domain 3: Documentation	7% Total
301	7%

CCST Level I

CCST Level I Task Descriptions

(as of 1 July 2013)

Task	Description
0101	Calibrate a device using appropriate test standards, recommended procedures, and manufacturer's specifications on instrument data sheets in order to record "as-found" readings, evaluate "as-found" readings against specified tolerance, make calibration adjustments as required, and record "as-left" data.
0102	Safely assess the condition of a device through inspection, testing, and documentation review in order to make adjustments to maintain device performance and accuracy and determine the need for any repairs.
0103	Apply preventative, predictive, and corrective maintenance methods for instruments and devices in order to minimize device failures and process downtime.
0104	Examine all pertinent documentation to determine which device(s) of the control loop could be causing observed discrepancies in order to prepare a plan of corrective action.
0105	Identify the correct device to be calibrated through documentation and instrument identification systems in order to facilitate proper calibration.
0106	Obtain applicable documents required to perform device calibration, testing, troubleshooting, or maintenance and review documents for accuracy and completeness.
0107	Perform repairs on instruments and devices by following proper industry protocol, appropriate safety and operating procedures, and manufacturer's recommendations in order to return the device to service.
0108	Prepare for removal and decontamination of device from operational service by reviewing the MSDS, appropriate PPE, and safety procedures.
0109	Select the correct testing equipment by using existing documentation, appropriate calibration procedures, and visual inspection in order to calibrate the device.
0110	Use documentation and field inspection to verify that appropriate utilities and equipment are available and operational in order to safely and effectively perform device testing.
0111	Apply the proper fittings, terminations, and electrical barriers for instruments and devices, utilizing the correct procedures in accordance with local regulatory codes and standards to maintain safety in hazardous environments.
0112	Isolate a process component from an operational system by following maintenance documentation and appropriate safety and operating procedures in order to perform testing or maintenance.
0113	Use appropriate testing equipment to measure and detect electrical and/or electronic properties to ensure proper loop installation and performance.
0201	Field verify the as-built condition of the installed control system through visual observation and comparison with applicable project documentation. Redline documentation as needed in order to provide information for further verification and update by engineering/maintenance to maintain accurate instrumentation records.
0202	Inspect the loop components through visual observation in order to verify that the components are correctly installed in accordance with applicable documentation to ensure safe and efficient device operation.
0203	Verify proper loop functionality by simulating a controller's measured variable value using appropriate simulation equipment.
0301	Document calibration, maintenance, troubleshooting, and repair using appropriate forms, calibration labels, and/or electronic records to provide permanent record of changes and device history.

CCST Level II

CCST Level II Performance Domains and Test Specifications

(as of 1 July 2013)

Task by Domain	Average Percent of Exam Questions
Domain 1: Calibration, Maintenance, Repair, Troubleshooting	61% Total
101	6%
102	6%
103	5%
104	2%
105	5%
106	2%
107	6%
108	5%
109	5%
110	2%
113	2%
114	5%
115	2%
116	6%
117	2%
Domain 2: Project Start-up, Commissioning, Loop-check, Project Organization, Planning	23% Total
201	2%
2020	5%
203	5%
204	6%
205	5%
Domain 3: Documentation	10% Total
301	5%
302	5%
Domain 4: Administration, Supervision, Management	6% Total
401	6%

CCST Level II

CCST Level II Task Descriptions

(as of 1 July 2013)

Task	Description
0101	Calibrate a device using appropriate test standards, recommended procedures, and manufacturer's specifications on instrument data sheets in order to record "as-found" readings, evaluate "as-found" readings against specified tolerance, make calibration adjustments as required, and record "as-left" data.
0102	Safely assess the condition of a device through inspection, testing, and documentation review in order to make adjustments to maintain device performance and accuracy and determine the need for any repairs.
0103	Apply preventative, predictive, and corrective maintenance methods for instruments and devices in order to minimize device failures and process downtime.
0104	Examine all pertinent documentation to determine which device(s) of the control loop could be causing observed discrepancies in order to prepare a plan of corrective action.
0105	Identify the correct device to be calibrated through documentation and instrument identification systems in order to facilitate proper calibration.
0106	Obtain applicable documents required to perform device calibration, testing, troubleshooting, or maintenance and review documents for accuracy and completeness.
0107	Perform repairs on instruments and devices by following proper industry protocol, appropriate safety and operating procedures, and manufacturer's recommendations in order to return the device to service.
0108	Prepare for removal and decontamination of device from operational service by reviewing the MSDS, appropriate PPE, and safety procedures.
0109	Select the correct testing equipment by using existing documentation, appropriate calibration procedures, and visual inspection in order to calibrate the device.
0110	Use documentation and field inspection to verify that appropriate utilities and equipment are available and operational in order to safely and effectively perform device testing.
0113	Use appropriate testing equipment to measure and detect electrical and/or electronic properties to ensure proper loop installation and performance.
0114	Demonstrate a thorough understanding of multi-step troubleshooting methodology while safely performing testing of equipment or processes.
0115	Evaluate control system tuning by observing system response to changes in controller parameters. Adjust PID tuning parameters as required to provide proper system response.
0116	Isolate a process component from an operational system by following maintenance documentation and appropriate safety and operating procedures in order to perform testing, maintenance, or troubleshooting.
0117	Evaluate installed industrial network data and performance using network diagnostic tools.
0202	Inspect the loop components through visual observation in order to verify that the components are correctly installed in accordance with applicable documentation to ensure safe and efficient device operation.
0203	Verify proper loop functionality by simulating a controller's measured variable value using appropriate simulation equipment.
0204	Assist site personnel during start-up to identify and correct problems that may arise during the commissioning of control systems.
0205	Verify final control element functionality by changing the values of the manipulated variables using the controller mode and output functions.

Task	Description
0301	Document calibration, maintenance, troubleshooting, and repair using appropriate forms, calibration labels, and/or electronic records to provide permanent record of changes and device history.
0302	Demonstrate a thorough understanding of system documentation and symbology to effectively troubleshoot instrumentation, control loops, and electrical and pneumatic installations.
0401	Identify electrical classification or other hazards in an area, and determine appropriate procedures to be followed for safe and effective operation in that area.

CCST Level III

CCST Level III Performance Domains and Test Specifications

(as of 1 July 2013)

Task by Domain	Average Percent of Exam Questions
Domain 1: Calibration, Maintenance, Repair, Troubleshooting	19%
101	5%
102	5%
119	5%
120	4%
Domain 2: Project Start-up, Commissioning, Loop-check, Project Organization, Planning	14%
204	5%
206	4%
207	5%
Domain 3: Documentation	10%
303	2%
304	4%
305	4%
Domain 4: Administration, Supervision, Management	57%
401	4%
402	4%
403	4%
404	4%
405	4%
406	2%
407	2%
408	4%
409	4%
410	4%
411	5%
412	2%
413	4%
414	2%
415	4%
416	2%
417	2%

CCST Level III

CCST Level III Task Descriptions

(as of 1 July 2013)

Task	Description
0101	Calibrate a device using appropriate test standards, recommended procedures, and manufacturer's specifications on instrument data sheets in order to record "as-found" readings, evaluate "as-found" readings against specified tolerance, make calibration adjustments as required, and record "as-left" data.
0102	Safely assess the condition of a device through inspection, testing, and documentation review in order to make adjustments to maintain device performance and accuracy and determine the need for any repairs.
0119	Analyze electrical circuits using appropriate testing equipment to ensure proper loop installation and performance.
0120	Examine all pertinent documentation to determine which device(s) of the control system could be causing observed discrepancies in order to prepare and coordinate a plan of corrective action.
0204	Assist site personnel during start-up to identify and correct problems that may arise during the commissioning of control systems.
0206	Examine all pertinent documentation in order to identify the proper operation of a control system and devices to provide a baseline against which to evaluate any problems.
0207	Inspect the control system components through visual observation in order to verify that the components are correctly installed in accordance with applicable documentation to ensure safe and efficient device operation.
0303	Collect, organize, and maintain industrial network data and manage information to ensure system integrity and optimize network performance.
0304	Assemble and examine all appropriate documents in order to verify completion of a project and to establish device records during all phases of a project.
0305	Generate as-built drawings and verify redlined documentation in order to provide accurate and current drawings for final approval.
0401	Identify electrical classification or other hazards in an area, and determine appropriate procedures to be followed for safe and effective operation in that area.
0402	Administer work orders and instrument identification systems (e.g., tags, stickers) in order to facilitate proper calibration, repair, and maintenance.
0403	Coordinate repairs on instruments and devices by ensuring that proper industry protocols and manufacturer's procedures or recommendations are followed in order to return the device to service.
0404	Coordinate the removal and decontamination of a device from operational service by reviewing the MSDS, appropriate PPE, and safety procedures.
0405	Develop and coordinate with all affected personnel the isolation of a process component from an operational system by reviewing maintenance documentation and appropriate safety and operation procedures in order to perform testing or maintenance.
0406	Develop and implement tracking system for the receipt, storage, and issuing of instruments onsite in order to control resources.
0407	Develop preventative, predictive, and corrective maintenance procedures for instruments and devices in order to minimize device failures and process downtime.
0408	Develop procedures for the use of simulation and test equipment to verify proper loop functionality, calibration, and maintenance.

Task	Description
0409	Develop, review, and maintain calibration, maintenance, troubleshooting, and repair documents to provide a permanent, accurate, and complete record of change and device history.
0410	Ensure that all documents are complete and accurate and comply with recommended procedures and job specifications.
0411	Ensure that applicable safety practices are followed and that personnel are informed of possible hazards while performing assigned tasks.
0412	Monitor related project costs, schedules, and resources to identify deviations from a project plan.
0413	Organize, review, and verify project documents (e.g., calibration and data sheets, loop drawings, P&IDs, IOM manuals, instrument location, and installation details) in order to maintain compliance with project specifications.
0414	Participate in control project planning in order to coordinate project resources and personnel, and ensure that all affected personnel are aware of their responsibilities.
0415	Update and maintain certified testing equipment, documentation, recommended procedures, and out-of-tolerance reporting to facilitate the operation of instruments and devices necessary for safety and quality assurance.
0416	Use product quality and process data to evaluate control system performance and make recommendations to optimize process efficiency, reliability, and safety.
0417	Verify that training and certifications of personnel (staff and contracted) are current and appropriately filed in compliance with procedures