PECB BEYOND RECOGNITION

Exam Preparation Guide

ISO 28000 Lead Implementer

GENERAL

The objective of the “PECB Certified ISO 28000 Lead Implementer” exam is to ensure that the candidate has the necessary competence to support an organization in establishing, implementing, managing, and maintaining a supply chain security management system (SCSMS).

The ISO 28000 Lead Implementer exam is intended for:

- Managers or consultants involved in and concerned with the implementation of the supply chain security management in an organization
- Project managers, consultants, or expert advisers seeking to master the implementation of the supply chain security management system
- Individuals responsible for maintaining conformity with the SCSMS requirements in an organization
- Members of an SCSMS implementation team

The exam covers the following competency domains:

- **Domain 1:** Fundamental principles and concepts of a supply chain security management system (SCSMS)
- **Domain 2:** Supply chain security management system (SCSMS)
- **Domain 3:** Planning the SCSMS implementation
- **Domain 4:** Implementing an SCSMS
- **Domain 5:** Performance evaluation, monitoring and measurement of an SCSMS
- **Domain 6:** Continual improvement of an SCSMS
- **Domain 7:** Preparing for an SCSMS certification audit

The content of the exam is divided as follows:

Domain 1: Fundamental principles and concepts of a supply chain security management system (SCSMS) **Main objective:** Ensure that the candidate understands and is able to interpret ISO 28000 principles and concepts	
Competencies	**Knowledge statements**
1. Ability to understand and explain the operations of the ISO organization and the development of supply chain security management standards 2. Ability to understand ISO 28000 related standards and their importance, including ISO 28001, ISO 28002, ISO 28003 and ISO 28004 3. Ability to identify for which industries and sectors is ISO 28000 standard flexible and applicable 4. Understand the main SCSMS advantages 5. Ability to explain and illustrate the main concepts in supply chain security management system 6. Ability to understand the importance of the supply chain in the global economy 7. Ability to interpret supply chain security activities 8. Ability to interpret concepts related to risk management	1. Knowledge of the application of the eight ISO management principles to supply chain security management system 2. Knowledge of the main standards in supply chain security management 3. Knowledge of the industries and sectors that use ISO 28000 including rail/air transport, sea transport, port facilities etc 4. Knowledge of the main SCSMS advantages including improvement of security, good governance, conformity to applicable laws and regulations and other industry standards, cost reduction, etc 5. Knowledge of the different sources of supply chain security management system requirement for an organization: laws, regulations, international and industry standards, contracts, market practices, internal policies 6. Knowledge of the main supply chain security management concepts and terminology as described in ISO 28000 7. Knowledge of the complexity of the transportation of goods in the global economy 8. Knowledge of activities such as inspection of cargo on entry, security of cargo while in-transit via the use of locks and tamper-proof seals, screening and validation of the contents of cargo being shipped, etc 9. Knowledge of risk management concepts including, likelihood, occurrence, threat, vulnerability and countermeasures 10. Knowledge on how to identify supply chain security management threats, vulnerabilities and impacts

Domain 2: Supply chain security management system (SCSMS)

Main objective: Ensure that the candidate understands, is able to interpret, and provide guidance on how to implement and manage a supply chain security management system requirements based on the best practices of ISO 28000

Competencies

1. Ability to identify, understand, classify and explain the clauses with requirements from ISO 28000
2. Ability to detail and illustrate the requirements and best practices by concrete examples
3. Ability to establish a security management policy
4. Ability to assess security risks
5. Ability to set SCSMS objectives and targets
6. Ability to understand top management responsibilities based on ISO 28000
7. Ability to train and aware organizations personnel regarding ISO 28000
8. Ability to establish plans and procedures regarding emergency preparedness, response and security recovery
9. Ability to measure and monitor SCSMS
10. Ability to evaluate security management plans and procedures
11. Ability to evaluate and initiate preventive actions
12. Ability to implement preventive actions
13. Ability to review the effectiveness of the implemented preventive actions
14. Ability to conduct internal audits at planned intervals

Knowledge statements

1. Knowledge of ISO 28000 requirements including security management policy, security risk assessment planning, implementation and operation, checking and corrective action and management review and continual improvement
2. Knowledge of the required elements of a security management policy
3. Knowledge on how to establish and maintain procedures that support the identification and assessment of security threats
4. Knowledge on how to establish objectives and targets that lead to a successful SCSMS by considering threats, risks and their impacts, all legal and regulatory requirements, views of interested parties, technology, organizations finances, organization operations and other critical assets
5. Knowledge on how to periodically review the established targets in order to ensure their consistency and relevance to the SCSMS
6. Knowledge on how to communicate the established targets to all organization's employees and third parties
7. Knowledge on how to define roles and responsibilities regarding the SCSMS implementation and management
8. Knowledge of preventive, detective and corrective measures that shall be taken to prevent and detect security incidents
9. Knowledge on how to establish and maintain procedures to monitor and measure the performance of organization security management system
10. Knowledge on how to conduct periodic reviews, tests and establish post-incident reports
11. Knowledge on how to keep records of the results of the periodic evaluations

	12. Knowledge on how to analyze and evaluate the preventive actions 13. Knowledge on how to mitigate consequences 14. Knowledge of the inputs and outputs of management reviews

Domain 3: Planning the SCSMS implementation

Main objective: Ensure that the candidate is able to plan the implementation of the SCSMS based on ISO 28000

Competencies	Knowledge statements
1. Ability to manage an SCSMS implementation project following project management best practices 2. Ability to gather, analyze and interpret the necessary information to plan the SCSMS implementation 3. Ability to observe, analyze and interpret the external and internal environment of an organization 4. Ability to perform a gap analysis and clarify the supply chain security management objectives of an organization 5. Ability to state and justify an SCSMS scope adapted to the security objectives of a specific organization 6. Ability to establish a supply chain security policy 7. Ability to manage risks related to the SCSMS 8. Ability to set security objectives, targets and programmes 9. Ability to identify all legal and regulatory requirements before implementing a SCSMS	1. Knowledge of the main project management concepts, terminology, process and best practice as described in ISO 10006 2. Knowledge of the principal approaches and methodology frameworks to implement an SCSMS 3. Knowledge of the main concepts and terminology related to organizations 4. Knowledge of an organization's external and internal environment 5. Knowledge of the main interested parties related to an organization and their characteristics 6. Knowledge of techniques to gather information on an organization and to perform a gap analysis of a management system 7. Knowledge of the characteristics of an SCSMS scope in terms of organizational, technological and physical boundaries 8. Knowledge of the policy drafting process 9. Knowledge of the importance of management commitment 10. Knowledge of the different approaches and main methodology characteristics to perform a risk assessment 11. Knowledge of the main activities of the risk management activities including context establishment, risk identification, risk analysis, risk evaluation, risk treatment, risk acceptance 12. Knowledge on how to set security objectives, determine targets and create security programmes

Domain 4: Implementing an SCSMS

Main objective: Ensure that the candidate is able to implement the processes of an SCSMS required for an ISO 28000 certification

Competencies	Knowledge statements
1. Ability to understand, analyze needs and provide guidance on the attribution of roles and responsibilities in the context of the implementation and management of an SCSMS 2. Ability to define the document and record management processes needed to support the implementation and the operations of an SCSMS 3. Ability to define and design security controls & processes and document them 4. Ability to implement supply chain security management policies & procedures 5. Ability to define and implement appropriate supply chain security management training, awareness and communication plans 6. Ability to establish and implement a SCSMS communication plan 7. Ability to implement the required processes and security controls of an SCSMS 8. Ability to identify potential emergency situations 9. Ability to establish and implement emergency procedures	1. Knowledge of the roles and responsibilities of the key actors during the implementation of an SCSMS and in its operation after the end of the implementation project 2. Knowledge of the main organizational structures applicable for an organization to manage supply chain security management 3. Knowledge of the best practices on document and record management processes and the document management life cycle 4. Knowledge of the characteristics and the differences between the different documents related to SCSMS: policy, procedure, guideline, standard, baseline, worksheet, etc 5. Knowledge of techniques and best practices to write supply chain security management policies, procedures and others types of documents include in an SCSMS 6. Knowledge of the characteristics and the best practices to implement supply chain security management training, awareness and communication plans

Domain 5: Monitoring, measurement, analysis and evaluation of an SCSMS

Main objective: Ensure that the candidate is able to evaluate, monitor and measure the performance of an SCSMS

Competencies

1. Ability to monitor and evaluate the effectiveness of an SCSMS in operation
2. Ability to verify the extent to which identified security requirements have been met
3. Ability to define and implemented an internal audit program for ISO 28000
4. Ability to perform regular and methodical reviews regarding the suitability, adequacy, effectiveness and efficiency of an SCSMS with policies and security objectives of an organization
5. Ability to define and implement a management review process and counsel management on it

Knowledge statements

1. Knowledge of the techniques and best practices to monitor the effectiveness of an SCSMS
2. Knowledge of the main concepts and components related to a supply chain security management measurement Programme: measures, attributes, indicators, dashboard, etc.
3. Knowledge of the characteristics and the differences between an operational, tactical and strategic supply chain security management indicators and dashboard
4. Knowledge of the techniques and methods to define and document adequate and reliable indicators
5. Knowledge of the main concepts and components related to the implementation and operation of an SCSMS internal audit program
6. Knowledge of the differences between the concepts of major nonconformity, minor nonconformity, anomaly and observation
7. Knowledge of the guidelines and best practices to write nonconformity report
8. Knowledge of the best practices on how to perform management reviews

Domain 6: Continual improvement of an SCSMS

Main objective: Ensure that the candidate is able to provide guidance on the continual improvement of an SCSMS

Competencies	Knowledge statements
1. Ability to identify, analyze the root-causes of nonconformities and proposed action plans to treat them 2. Ability to identify, analyze the root-cause of potential nonconformities and proposed action plans to treat them 3. Ability to understand the principle and concepts related to continual improvement 4. Ability to counsel an organization on how to continually improve the effectiveness and the efficiency of an SCSMS 5. Ability to implement SCSMS continual improvement processes in an organization 6. Ability to determine the appropriate business improvement tools to support continual improvement processes of a specific organization	1. Knowledge of the main processes, tools and techniques used by professionals to identify the root-causes of nonconformities 2. Knowledge of the characteristics and the difference between corrective actions and preventive actions 3. Knowledge of the main processes, tools and techniques used by professionals to develop and proposed the best corrective and preventive action plans 4. Knowledge on how to draft action plans and submitting such plans to the top management for approval 5. Knowledge of the main concepts related to continual improvement 6. Knowledge of the characteristics and the difference between the concept of effectiveness and the efficiency 7. Knowledge on how to continually monitor the change factors that can influence SCSMS effectiveness

Domain 7: Preparing for an SCSMS certification audit

Main objective: Ensure that the ISO 28000 Lead Implementer candidate is able to prepare an organization for the certification against ISO 28000

Competencies

1. Ability to understand the main steps processes and activities related to an ISO 28000 certification audit
2. Ability to select a certification body
3. Ability to review the readiness of an organization for an ISO 28000 certification audit
4. Ability to prepare organizations personnel for an ISO 28000 certification audit
5. Ability to understand the difference between certification audit steps

Knowledge statements

1. Knowledge of the certification process steps such as SCSMS implementation, internal audit and management review, selection of the certification body, audit preparation, stage 1 audit, stage 2 audit, follow up audit, confirmation of registration and continuous improvement and surveillance audit
2. Knowledge of the main criteria for selecting a certification body
3. Knowledge on how to conduct self –evaluation, prepare the personnel and practice audit to determine whether the organization is ready for the certification audit
4. Knowledge of the difference of the stage 1 audit and the stage 2 audit
5. Knowledge of stage 1 audit requirements, steps and activities
6. Knowledge of the documentation review criteria
7. Knowledge of stage 2 audit requirements, steps and activities
8. Knowledge of follow-up audit requirements, steps and activities
9. Knowledge of surveillance audits and recertification audit requirements, steps and activities
10. Knowledge of the requirements, guidelines and best practices to develop action plans following an ISO 28000 certification audit

Based on the above-mentioned domains and their relevance, 12 questions are included in the exam, as summarized in the table below:

			Level of understanding (Cognitive/Taxonomy) required					
		Points per question	Questions that measure comprehension, application, and analysis	Questions that measure synthesis and evaluation	Number of questions per competency domain	% of the exam devoted to each competency domain	Number of points per competency domain	% of points per competency domain
Competency domains	Fundamental principles and concepts of a supply chain management system (SCSMS)	5	X		1	8.33	5	6.67
	Supply chain security management system (SCSMS)	10		X	1	16.66	10	13.34
	Planning the SCSMS implementation	5		X	3	25	15	20.01
		5		X				
		5	X					
	Implementing an SCSMS	5		X	2	16.66	15	20.01
		10	X					
	Performance evaluation, monitoring, and measurement of an SCSMS	5		X	3	25	20	26.68
		5		X				
		10	X					
	Continual improvement of an SCSMS	5		X	1	8.33	5	6.67
	Preparing for an SCSMS certification audit	5	X		1	8.33	5	6.67
	Total points	75						
	Number of questions per level of understanding		5	7				
	% of the exam devoted to each level of understanding (cognitive/taxonomy)		42	58				

The exam passing score is **70%**.

After successfully passing the exam, candidates will be able to apply for the “PECB Certified ISO 28000 Lead Implementer” credential depending on their level of experience.

Taking the Exam

General Information on the Exam

Candidates are required to arrive/be present at least 30 minutes before the exam starts. Candidates who arrive late will not be given additional time to compensate for the late arrival and may not be allowed to sit for the exam.

Candidates are required to bring a valid identity card (a national ID card, driver's license, or passport) and show it to the invigilator.

If requested on the day of the exam (paper-based exams), additional time can be provided to candidates taking the exam in a non-native language, as follows:

- 10 additional minutes for Foundation exams
- 20 additional minutes for Manager exams
- 30 additional minutes for Lead exams

PECB Exam Format and Type

1. Paper-based: Exams are provided on paper, where candidates are not allowed to use anything but the exam paper and a pen. The use of electronic devices, such as laptops, tablets, or phones, is not allowed. The exam session is supervised by a PECB approved Invigilator at the location where the Reseller has organized the training course.

2. Online: Exams are provided electronically via the PECB Exams application. The use of electronic devices, such as tablets and cell phones, is not allowed. The exam session is supervised remotely by a PECB Invigilator via the PECB Exams application and an external/integrated camera.

For more detailed information about the online format, please refer to the PECB Online Exam Guide.

PECB exams are available in two types:
1. Essay-type question exam
2. Multiple-choice question exam

This exam comprises essay-type questions. They are used to determine and evaluate whether a candidate can clearly answer questions related to the defined competency domains. Additionally, problem-solving techniques and arguments that are supported with reasoning and evidence will also be evaluated.

The exam is open book and is not intended to measure memorizing or recalling information. It aims to evaluate candidates' comprehension, analytical skills, and applied knowledge. Therefore, candidates are required to provide logical and convincing answers and explanations in order to demonstrate that they have understood the content and the main concepts of the competency domains.

Since the exam is "open book," candidates are authorized to use the following reference materials:

- A hard copy of ISO 28000 standard
- Training course materials(accessed through PECB Exams app and/or printed)
- Any personal notes made by the candidate during the training course(accessed through PECB Exams app and/or printed)
- A hard copy dictionary

Any attempts to copy, collude, or otherwise cheat during the exam session will automatically lead to failure of the exam.

PECB exams are available in English and other languages. For the availability of the exam in a particular language, please contact examination@pecb.com.

Note: PECB will progressively transition to multiple-choice exams. They will also be open book and comprise scenario-based questions that will allow PECB to evaluate candidates' knowledge, abilities, and skills to use information in new situations (apply), draw connections among ideas (analyze), and justify a stand or decision (evaluate). All PECB multiple-choice exams have one question and three alternatives, of which only one is correct.

For specific information about exam types, languages available, and other details, visit the List of PECB Exams.

Receiving the Exam Results

Exam results will be communicated via email. The only possible results are *pass* and *fail;* no specific grade will be included.

- The time span for the communication starts from the exam date and lasts three to eight weeks for essay type exams and two to four weeks for multiple-choice paper-based exams

- For online multiple-choice exams, candidates receive their results instantly

Candidates who successfully complete the exam will be able to apply for one of the credentials of the respective certification scheme.

For candidates who fail the exam, a list of the domains where they have performed poorly will be added to the email to help them prepare better for a retake.

Candidates that disagree with the results may request for a re-evaluation by writing to results@pecb.com within 30 working days of receiving the results. Re-evaluation requests received after 30 days will not be processed. If candidates do not agree with the results of the reevaluation, they have 30 working days from the date when they received the reevaluated exam results to file a complaint through the PECB Ticketing System. Complaints received after 30 days will not be processed.

Exam Retake Policy

There is no limit on the number of times that a candidate may retake an exam. However, there are certain limitations in terms of the allowed time frames between exam retakes.

- If a candidate does not pass the exam on the 1st attempt, they must wait 15 days from the initial date of the exam for the next attempt (1st retake). Retake fees apply.
  Note: *Candidates who have completed the training course but failed the exam are eligible to retake the exam once for free within a 12-month period from the initial date of the exam.*
- If a candidate does not pass the exam on the 2nd attempt, they must wait three months after the initial date of the exam for the next attempt (2nd retake). Retake fees apply.
  Note: *For candidates that fail the exam in the 2nd retake, PECB recommends them to attend a training course in order to be better prepared for the exam.*
- If a candidate does not pass the exam on the 3rd attempt, they must wait six months after the initial date of the exam for the next attempt (3rd retake). Retake fees apply.
- After the 4th attempt, the waiting period for further retake exams is 12 months from the date of the last attempt. Retake fees apply.

To arrange exam retakes (date, time, place, costs), candidates need to contact the PECB Reseller/Distributor who has initially organized the session.

Reschedule the Exam

For any changes with regard to the exam date, time, location, or other details, please contact examination@pecb.com.

Closing a Case

If a candidate does not apply for the certificate within three years, their case will be closed. Candidates whose case has been closed due to the expiration of the certification period have the right to request to reopen their case. However, PECB will no longer be responsible for any changes in the conditions, standards, policies, candidate handbook, or exam preparation guide that were applicable before the case was closed. A candidate requesting their case to reopen must do so in writing and pay the required fee.

Exam Security

A significant component of a successful and respected professional certification credential is maintaining the security and confidentiality of the exam. PECB relies upon the ethical behavior of certificate holders and applicants to maintain the security and confidentiality of PECB exams. Any disclosure of information about the content of PECB exams indicates violation of PECB's Code of Ethics. PECB will take action against individuals who violate PECB Policies and the Code of Ethics. These actions include permanently barring individuals from pursuing PECB credentials and revoking the awarded credentials. PECB will also pursue legal action against individuals or organizations who infringe upon its copyrights, proprietary rights, and intellectual property.

Sample Exam Questions

Question 1: Interpretation of ISO clauses
For each of the following clauses of the ISO 28000 standard, please provide an action plan with at least two concrete actions that would be acceptable to ensure conformity to the clause.

4.3.4 Security management targets

Possible answers:

- *Document realistic targets consistent with the security management objectives*
- *Communicate the targets to the employees*

Question 2: Development of metrics
For each of the following clauses of the ISO 28000 standard, please provide two examples of metrics that would be acceptable to measure the conformity to the clause.

4.6 Management review and continual improvement

Possible answer:

- *Management review meetings completed to date*
- *Average participation rates in management review meeting to date*

PECB BEYOND RECOGNITION

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