PECB

ISO-IEC-42001-Lead-Auditor

ISO/IEC 42001:2023 Artificial Intelligence Management System Lead Auditor Exam

Latest Version: 9.1

Question: 1

Which core element emphasizes that AI systems should be designed to avoid bias and ensure fair treatment for all individuals?

A. Transparency and Explainability
B. Fairness and Non-Discrimination
C. Accountability
D. Human-Centered Design

Answer: B

Explanation:
The principle of Fairness and Non-Discrimination is one of the core ethical and governance pillars emphasized in ISO/IEC 42001:2023, especially in Clause 4.2 (Understanding the needs and expectations of interested parties) and Clause 6.1 (Actions to address risks and opportunities) where ethical risks related to AI systems are assessed.
According to the standard and accompanying PECB training guide, fairness is defined as ensuring that AI systems do not create or perpetuate bias, and that individuals and groups are treated equitably, with measures in place to detect and mitigate discrimination. This is often embedded in risk assessments and operational controls when managing AI systems.
In ISO/IEC 42001, organizations are required to consider ethical, legal, and societal impacts of their AI systems, and Fairness and Non-Discrimination is a key tenet of trustworthy AI.
Reference: ISO/IEC 42001:2023, Clauses 4.2, 6.1.2, and 8.2.3
PECB Lead Auditor Course Guide, Section on “Ethical Principles of AI,” Subsection: Fairness and Non-Discrimination
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Question: 2

A retail company wants to implement a system that can predict customer buying behavior based on their browsing history and past purchases. Which AI concept would be most suitable for developing this predictive system?

A. Natural Language Processing (NLP)
B. Computer Vision
C. Machine Learning (ML)
D. Deep Learning (DL)

Answer: C

Explanation:
Machine Learning (ML) is the most suitable AI concept in this scenario. ML focuses on developing algorithms that can learn from structured or unstructured data and make predictions based on historical patterns.
In this case, analyzing customer browsing history and purchase records falls directly under supervised learning, a subcategory of ML, which is typically used for predictive modeling in retail (such as next-best-offer, product recommendation, or demand forecasting).
According to the PECB Lead Auditor Study Guide (Domain 1), ML is specifically referenced as the core technique for prediction systems, user behavior modeling, and data-driven decision-making systems.
Though Deep Learning (DL) is a subset of ML, it is often used for more complex pattern recognition tasks such as image or speech recognition, which is not explicitly required here.
Reference: PECB Lead Auditor Guide – Domain 1, Topic: "AI Concepts" – Table differentiating ML, DL, NLP, and Computer Vision
ISO/IEC 42001:2023 Clause 8.2.3 (Operational Planning and Control) – Emphasizes selecting AI techniques appropriate to the context and purpose

Question: 3

An AI system is being developed to assist elderly people in their daily activities. The system needs to be intuitive and align with the needs and values of its users. Which core element of AI should guide the design and development of this AI system?

A. Fairness and Non-Discrimination
B. Transparency and Explainability
C. Accountability
D. Human-Centered Design

Answer: D

Explanation:
The correct guiding principle in this scenario is Human-Centered Design. This principle is explicitly emphasized in ISO/IEC 42001:2023, particularly in the context of aligning AI systems with human needs, values, and well-being.
Human-Centered Design ensures that the AI system is designed with a focus on users, particularly vulnerable populations like the elderly. The AI should be intuitive, inclusive, and usable while enhancing human capabilities.
In ISO/IEC 42001:2023:
Clause 4.2 (Understanding the needs and expectations of interested parties) requires that systems consider stakeholders, particularly end users, when defining system requirements.
Clause 6.1.2 (AI risk identification and assessment) and Clause 8.2.3 (Operational planning and control) reinforce designing systems that respect and respond to human diversity and usability needs.
The PECB Lead Auditor Guide – Domain 1 lists Human-Centered Design as one of the foundational AI principles essential for promoting trust, accessibility, and adoption among users — especially those with specific assistance needs.

Reference: ISO/IEC 42001:2023 – Clauses 4.2, 6.1.2, 8.2.3
PECB Lead Auditor Guide – Domain 1, Topic: "Trustworthy and Ethical AI Principles," Subsection: Human-Centered Design
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Question: 4

A social media platform wants to automatically detect and remove inappropriate content from images and videos uploaded by users. Which AI concept is most appropriate for this task?

A. Natural Language Processing (NLP)
B. Computer Vision
C. Machine Learning (ML)
D. Deep Learning (DL)

Answer: B

Explanation:
The most appropriate AI concept for analyzing images and videos is Computer Vision. Computer Vision is a subfield of artificial intelligence that enables systems to interpret and process visual data, such as photos and video frames, which is exactly what is required in this scenario.
According to the PECB Lead Auditor Guide, Computer Vision is explicitly associated with tasks such as object recognition, content moderation, facial recognition, and image classification — all of which are relevant in detecting inappropriate content on platforms like social media.
While Deep Learning is often used within Computer Vision (e.g., convolutional neural networks), the correct high-level concept being asked here is Computer Vision, which encompasses the overall domain applicable to this scenario.
NLP is used for analyzing text and language, not visual content.
ML is a broader category under which Computer Vision models are trained, but is too general for this specific task.
Reference: PECB Lead Auditor Guide – Domain 1, Table: "AI Technologies and Use Cases"
ISO/IEC 42001:2023 – Clause 8.2.3, which supports aligning AI capabilities (e.g., vision, language, planning) with operational requirements

Question: 5

Which phase involves the collection of objective evidence through interviews, observations, and examination of documents?

A. Conducting the audit
B. Audit planning
C. Audit follow-up
D. Preparing the audit report

Answer: A

Explanation:
The Conducting the audit phase (Domain 5) is where the audit team actively collects objective evidence through:
Interviews with relevant personnel
Observation of processes and systems
Examination of documents and records
This aligns with the procedures described in ISO 19011:2018 (Guidelines for Auditing Management Systems), which is referenced and applied in ISO/IEC 42001 auditing practices.
According to the PECB Lead Auditor Guide, Domain 5 explicitly outlines this activity as the main operational phase of the audit, aimed at evaluating conformity of the AI Management System with ISO/IEC 42001 requirements.
Reference: PECB Lead Auditor Guide – Domain 5: "Conducting the audit"
ISO 19011:2018 – Clauses 6.4.5 and 6.4.6 (Collecting and verifying information)
ISO/IEC 42001:2023 – Clause 9.2.2 (Internal Audit Implementation)
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