

PRACTICE QUESTIONS

EC-Council

Artificial Intelligence Essentials (AIE)

SHARED BY [u/honest_dolphin_45](#) on aiexamcerts

EDITION Free Set 1

QUESTIONS 10

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EXAM EC-Council Artificial Intelligence Essentials (AIE)

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10 practice questions for the EC-Council Artificial Intelligence Essentials (AIE) exam, each followed by its answer and a short explanation. More free sets and the full practice exam:

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1. What is the main difference between a rules-based program and a machine learning system?
- A A rules-based program learns its logic from many examples, while a machine learning system depends only on hand-coded rules and fixed logic
 - B Rules-based programs follow logic that people write explicitly, while machine learning derives logic from example data
 - C Rules-based programs can only run on cloud servers
 - D Machine learning systems never change after they are deployed

Answer: B

A rules-based program executes logic that a person wrote explicitly, while a machine learning system infers its behavior from data. The option that reverses the two is the most tempting because it sounds like a plausible contrast, but it swaps the roles. Hosting location and whether a system changes after deployment are not what separates the two approaches.

2. Which TWO tasks are commonly handled well by general AI tools such as ChatGPT, Claude, Gemini, or Copilot, when outputs are reviewed? (Choose two.)
- A Drafting and rewriting emails in a different tone
 - B Guaranteeing a fact from a live database without checking it
 - C Generating a first draft of meeting notes from a transcript
 - D Signing off on a financial audit
 - E Providing a certified medical diagnosis

Answer: A, C

Rewriting text in a new tone and producing a first draft of notes from a transcript are established everyday uses that a reviewer can check quickly. Guaranteeing facts from a live database, signing off on an audit, and giving a certified diagnosis all require verified data or accountable professionals. The guaranteed fact option is tempting because the tool sounds authoritative, but generated claims must still be verified.

3. Which statement about the training, validation, and test split is correct?
- A The test set is used to tune hyperparameters during every training iteration
 - B The validation set is merged into the training data so the model sees every example
 - C The test set is held back until the end to estimate performance on unseen data
 - D The training set is used only after deployment to update the model

Answer: C

The test set is kept separate and used at the end to estimate how the model performs on unseen data. Using it to tune during training would leak information and inflate the result. The option about merging the validation set into training is tempting because more data sounds better, but it removes the means of checking generalization.

4. What does a system prompt or role instruction usually do in an AI chat application?
- A It stores the user's previous conversations permanently in the model's weights
 - B It replaces the training data with new examples at each request
 - C It deletes harmful answers after the model writes them
 - D It sets standing instructions, such as tone or role, for the responses

Answer: D

A system prompt or role instruction sets persistent guidance such as tone, persona, or constraints that apply across the conversation. It does not retrain the model or alter its weights. The option about storing conversations in the weights is the most tempting, but chat history does not get written into the model's parameters.

5. When a person must be able to review, override, or stop an AI system's decisions, the governance principle is called human _____.

Answer: oversight

Human oversight means that people keep the authority and the practical ability to review, correct, override, or halt AI decisions. Automation alone without that capacity removes an important safeguard. The answer is oversight because the question asks for the governance principle of human control.

6. A spam filter that improves its accuracy as it sees more labeled emails is an example of what?
- A Machine learning, because the system improves from example data
 - B A fixed rules engine with no learning component
 - C Hardware acceleration that speeds up the email server
 - D Symbolic logic built only from hand-written if-then statements with no learning step

Answer: A

A filter whose accuracy improves as it processes labeled examples is learning from data, which is the defining feature of machine learning. A fixed rules engine would not change its behavior from new examples. The symbolic logic option is tempting because it is also a form of AI, but it is not described as learning from data.

7. A team wants a quick first pass at reviewing a long technical document. Which AI use is most appropriate with human checking?
- A Treating the summary as a verified source for legal citations
 - B A concise summary plus open questions for a reviewer to verify
 - C Publishing the summary directly to customers without reading it
 - D Using the summary to replace the source document in an audit file

Answer: B

A concise summary with open questions gives reviewers a fast starting point while keeping verification with the people who read the source. Treating a summary as a verified citation or using it to replace the source document are misuses. The option about publishing directly is tempting for speed, but it removes the human check entirely.

8. A model that performs very well on its training data but poorly on new data may be overfitting.
- A True
 - B False

Answer: A (True)

Overfitting occurs when a model learns the particulars of its training examples, including noise, and fails to generalize. A large gap between training performance and performance on unseen data is the typical sign. The statement is true as a general description of that warning sign.

9. Which prompt technique asks the model to reason through intermediate steps before giving a final answer?
- A Zero-shot prompting, which gives no examples
 - B Role prompting, which assigns the assistant a persona
 - C Chain-of-thought prompting, which asks for step-by-step reasoning
 - D Temperature tuning, which changes how random or varied the output wording is

Answer: C

Chain-of-thought prompting explicitly asks the model to work through intermediate steps, which often improves results on multi-step problems. Zero-shot prompting is about whether examples are supplied, not how reasoning is structured. Temperature tuning is tempting because it is a common prompt-related setting, but it controls randomness rather than reasoning steps.

10. Which practice best reduces the risk of bias in an AI system used for hiring decisions?
- A Using the most recent hiring records without checking their composition
 - B Removing all demographic data from the dataset and assuming bias is gone
 - C Trusting the vendor's accuracy claim without independent testing
 - D Testing outcomes across demographic groups and reviewing them with humans

Answer: D

Testing outcomes across groups and reviewing them with people is how disparities are detected and corrected. Removing demographic fields alone does not remove bias, because other features can act as proxies. The option about removing demographic data is the most tempting, but it assumes a fix that the data does not guarantee.