

PRACTICE QUESTIONS

USAI

Certified Artificial Intelligence Scientist

SHARED BY [u/Gentle-Pencil-8629](#) on aiexamcerts

EDITION	Free Set 1
QUESTIONS	10
SHARED	October 15, 2026
EXAM	USAI Certified Artificial Intelligence Scientist

Shared by u/Gentle-Pencil-8629 on aiexamcerts

10 practice questions for the USAII Certified Artificial Intelligence Scientist exam, each followed by its answer and a short explanation. More free sets and the full practice exam:

www.aiexamcerts.com/usaii/certified-artificial-intelligence-scientist. Spotted a mistake? Email support@aiexamcerts.com with the exam name and the question number.

1. Which activation function is most commonly used in the hidden layers of modern deep feedforward networks?

- A Sigmoid applied to every hidden unit
- B Softmax applied to every hidden unit
- C A linear identity function applied to every hidden unit
- D Rectified linear unit (ReLU)

Answer: D

ReLU is cheap to compute and avoids the saturation that slows learning in deep sigmoid networks, which is why it is the common default for hidden layers. Sigmoid is the tempting distractor because it appears in many textbooks, but it saturates for large inputs. Softmax is used at the output to turn scores into class probabilities, not in hidden layers.

2. In gradient-based training, the _____ controls how far each parameter update moves along the negative gradient.

Answer: learning rate (also accepted: learning-rate, step size)

The learning rate scales each gradient step, so a value that is too large can diverge while one that is too small trains slowly. Batch size is a common confusion, but it changes how gradients are estimated rather than how far each step moves. The accepted answers cover the usual spellings and the step-size synonym.

3. A screening model has high recall but low precision. What does this mean?

- A It catches most true positives but raises many false alarms
- B It flags few cases, and most of its flags are correct
- C It has high accuracy on the negative class only
- D Its predicted probabilities are poorly calibrated across bins

Answer: A

High recall means few positives are missed, and low precision means many flagged cases are actually negative. The distractor about few flags describes high precision and low recall, which is the opposite pattern. Calibration is a separate property of probability estimates and does not define precision or recall.

4. Adversarial examples are inputs with small, deliberately chosen perturbations that are designed to make a model misclassify them.
- A True
 - B False

Answer: A (True)

Adversarial examples exploit sensitivity in the model's decision surface, so changes too small for a person to notice can flip the output. This is why robustness testing belongs in model evaluation. The statement is true.

5. Which two practices reduce the risk of overfitting to the validation set during hyperparameter tuning? (Choose two.)
- A Selecting the hyperparameters with the best validation score through unlimited repeated trials
 - B Tuning on the test set and reporting the best result found there
 - C Keeping a separate, untouched test set for the final estimate
 - D Removing all validation data to save time during the search
 - E Using nested cross-validation when comparing model families

Answer: C, E

A separate test set gives an estimate that the tuning process never touched, and nested cross-validation keeps the selection step separate from the performance estimate. Unlimited repeated trials on the validation set is the tempting distractor, because it looks like diligence, but it fits the validation set itself. Tuning on the test set destroys its value as an unbiased estimate.

6. Which practice best supports reproducing a trained model's results months after release?
- A Keeping only the final model weights in an unversioned storage bucket
 - B Versioning code, data snapshots, configuration and environment with the model
 - C Retraining on whatever data is current each time a result is requested by the business
 - D Recording the accuracy figure in an email thread with the project sponsor

Answer: B

Reproduction needs the code, exact data, settings and runtime environment that produced the artifact, so they must be versioned together. Keeping only the weights is a tempting distractor, since the weights look like the complete product, but without the data and code they cannot be rebuilt. Retraining on current data produces a different model.

7. Which fairness metric compares the rate of positive predictions across groups without conditioning on the true outcome?
- A Equalized odds
 - B Calibration within groups
 - C Demographic parity
 - D Individual counterfactual fairness

Answer: C

Demographic parity requires similar selection rates across groups, regardless of who actually qualifies. Equalized odds is the tempting distractor, because it also compares groups, but it conditions on the true outcome by matching error rates. Calibration within groups and counterfactual fairness address different questions.

8. A _____ store is a shared repository that serves engineered features consistently to both training pipelines and online prediction services.

Answer: feature (also accepted: feature store)

A feature store keeps the definition and values of features in one place, which reduces training-serving skew. A model registry tracks model versions and approvals, which is a different artifact. Accepted answers include the hyphenated spelling and a common alternative name.

9. Before a generative AI assistant is approved for customer support, which risk must be documented as a go or no-go consideration?
- A Hallucinated policy answers reaching customers without human review
 - B The placement of the vendor logo inside the chat interface
 - C The number of meetings needed before the budget is approved
 - D The color palette used for the chat window

Answer: A

A generative model can state invented policy with confidence, so the approval needs a review path or guardrails for those answers. The cosmetic distractors such as logo placement and color are not decision risks. Budget meetings matter to the project but say nothing about answer quality.

10. A dataset contains personal data about EU residents. Which GDPR principle requires that personal data be kept no longer than necessary for the stated purpose?
- A Accuracy of the personal data held
 - B Integrity and confidentiality of processing
 - C Lawfulness, fairness and transparency
 - D Storage limitation

Answer: D

Storage limitation requires a retention period tied to the purpose, after which data is deleted or anonymized.

Accuracy is a real GDPR principle, which makes it the tempting distractor, but it concerns correctness rather than retention. Integrity and confidentiality covers security controls, and lawfulness covers the basis for processing.