

Okay, here are 10 Multiple Choice Questions (MCQs) based on the provided text.

1

Question: According to the text, what is machine learning usually associated with?

- A) Changes in systems performing tasks associated with physics
- B) Changes in systems performing tasks associated with artificial intelligence (AI)
- C) Changes in systems performing tasks associated with economics
- D) Changes in systems performing tasks associated with biology

Correct Answer: B)

2

Question: According to the text, which of the following is NOT a reason why machine learning is important?

- A) Some tasks cannot be defined well except by example
- B) Machine learning can help us understand how animals and humans learn
- C) Human designers always produce machines that work perfectly as desired
- D) Machine learning methods can often be used to extract relationships hidden in large piles of data

Correct Answer: C)

3

Question: Which of the following disciplines is NOT listed as a "wellspring" of Machine Learning in the text?

- A) Statistics
- B) Brain Models
- C) Quantum Physics
- D) Artificial Intelligence

Correct Answer: C)

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Question: According to the text, what are the two major settings in which we wish to learn a function?

- A) Reinforcement learning and evolutionary learning
- B) Supervised learning and unsupervised learning
- C) Batch learning and incremental learning
- D) Online learning and offline learning

Correct Answer: B)

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Question: What is a key difference between speed-up learning and inductive learning, according to the text?

- A) Speed-up learning creates genuinely new functions, while inductive learning finds equivalent, computationally efficient ones.
- B) Speed-up learning creates genuinely new functions, while inductive learning improves the accuracy of the existing ones.
- C) Speed-up learning changes an existing function into an equivalent, computationally more efficient one, while inductive learning creates genuinely new functions.
- D) Speed-up learning is always batch-based, while inductive learning is always incremental.

Correct Answer: C)

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Question: According to the text, what is the purpose of the testing set in supervised learning?

- A) To train the induced function.
- B) To evaluate the result of learning or how well the hypothesized function can generalize.
- C) To introduce noise into the data.
- D) To speed up the learning process.

Correct Answer: B)

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Question: According to the text, what is bias in the context of machine learning?

- A) A preference for complex models over simple ones.
- B) A random selection of hypotheses from the entire set of possible functions.
- C) A priori information or constraints used to limit the set of hypotheses considered.
- D) The tendency of a learning algorithm to make mistakes on the training data.

Correct Answer: C)

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Question: According to the text, what are the two main varieties of bias that machine learning researchers have identified?

- A) Statistical bias and psychological bias
- B) Absolute bias and preference bias
- C) Inductive bias and deductive bias
- D) Supervised bias and unsupervised bias

Correct Answer: B)

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Question: Who is credited in the text with the phrase "non sunt multiplicanda entia praeter necessitatem", relating to Occam's razor?

- A) Nils J. Nilsson
- B) Nils J. Getoor
- C) William of Occam
- D) Pat Langley

Correct Answer: C)

Question: Which of the following is NOT mentioned as a type of computational structure to be learned in the text?

- A) Functions
- B) Logic programs and rule sets
- C) Finite-state machines
- D) Quantum algorithms

Correct Answer: D)