1. What is the goal of supervised learning? 1 / 1 point

- ○ Find an underlying structure of the dataset without any labels.
- ○ Find the target.
- ○ Predict the features.
- ◉ Predict the labels.

✓ Correct
The goal for supervised learning is to be able to predict the label.

2. What is deep learning? 1 / 1 point

- ◉ Deep learning is machine learning that involves deep neural networks.
- ○ Deep learning is another name for artificial intelligence.
- ○ Deep learning includes artificial intelligence and machine learning.
- ○ None of the above are correct.

✓ Correct
Deep learning is machine learning that involves using very complicated models called deep neural networks. Deep learning is a subset of machine learning.

3. When is a standard machine learning algorithm usually a better choice than using deep learning to get the job done? 1 / 1 point

- ◉ When working with small data sets.
- ○ When the data is steady over time.
- ○ When working with large data sets.
- ○ None of the above are correct.

✓ Correct
A standard machine learning algorithm is a better choice when you are working with smaller datasets, and if the data is changing a lot over time and you don't have a steady dataset.

4. What is a Turing test? 1 / 1 point

- ○ It tests the dataset.
- ○ It tests and cleans the dataset.
- ◉ It tests a machine's ability to exhibit intelligent behavior.
- ○ It tests images.

✓ Correct
In 1950, Alan Turing developed the Turing test to test a machine's ability to exhibit intelligent behavior. Alan Turing's test has served as a foundational threshold for artificial intelligence.

5. What are some of the different milestones in deep learning history? 1 / 1 point

- Deep Blue defeats a world champion chess player, and AlexNet is created.
- Deep Blue defeats a world champion chess player and TensorFlow is released
- Geoffrey Hinton’s work, AlexNet, and TensorFlow
- Deep Blue defeats a world champion chess player, and Keras is released.

Correct
In 2006, the previous limitations of deep learning, namely exploding and vanishing gradients were overcome with algorithmic advancements such as Geoffrey Hinton's work on unsupervised pre-training. Neural networks are rebranded as deep learning, as we are able to train much deeper networks, networks with more layers; In 2012, a deep learning model using convolutional neural nets called AlexNet achieved a top five error of 15.3 percent; In 2015, one of the most popular libraries, TensorFlow, was built for deep learning, making it more powerful and accessible.

6. What is artificial intelligence? 1 / 1 point

- A subset of deep learning.
- Any program that can sense, reason, act, and adapt.
- A subset of machine learning
- None of the above.

Correct
Artificial intelligence is any program that can sense, reason, act, and adapt. It is essentially a machine taking any form of intelligent behavior.

7. What are two spaces within AI that are going through drastic growth and innovation? 1 / 1 point

- Computer vision and natural language processing.
- Language processing and deep learning.
- Deep learning and machine learning.
- Computer vision and deep learning.

Correct
In two spaces we are seeing drastic growth and innovation, computer vision and natural language processing. The sharp advancements in computer vision are impacting multiple areas. For example, cars getting to the point where they can drive themselves. Similarly, natural language processing is booming with vast improvements in ability to translate, determine sentiment, clustering of new articles, writing papers, and many others.

8. Why did AI flourish so much in the last years? 1 / 1 point

- Stylish designed computers
- Faster and inexpensive computers and data storage
- Access to hardware for cleaning data
- Data storage in the cloud is much more expensive

Correct
AI flourished in the last years with the cloud infrastructure now in place to store large amounts of data for much cheaper, and the plethora of new ways to capture data are now able to build larger, more new once datasets to learn underlying patterns across a multitude of fields. We also have faster computers, and we now have access to powerful hardware for processing and storing data.

9. How does Alexa use artificial intelligence? 1 / 1 point

- ○ Recognizes faces and pictures.
- ◉ Recognizes our voice and answers questions.
- ○ Suggests who a person on a photo is.
- ○ None of the above answers are correct.

✓ Correct
Alexa, in our homes, recognizes our voice and answers questions or does tasks for us through natural language processing.

10. What are the first two steps of a typical machine learning workflow? 1 / 1 point

- ○ Problem statement and data cleaning.
- ◉ Problem statement and data collection.
- ○ Data collection and data transformation.
- ○ None of the above answers is correct.

✓ Correct
The first step of a typical machine learning workflow is the problem statement. What problem are you trying to solve? The second step is data collection. What data do you need to solve the problem?