### Example assessment questions for analyzing CNNs, data augmentation, and transfer learning

Question

A class activation map can be used to determine how important an individual pixel in the input image was in the decision-making process.

1. True
2. **False**

Explanation: A saliency map is used to determine how important an individual pixel in the input image was in the decision-making process.

Question

Data augmentation can fix training issues caused by low-quality images (such as poor lighting, subject out of focus, cropped objects, etc.).

1. True
2. **False**

Explanation: Data augmentation cannot fix issues caused by low-quality input data. While it can potentially filter images to create sharpened, brighter, etc. copies of the original, it is not a perfect substitute for collecting good data.

Question

Data augmentation can help reduce overfitting.

1. **True**
2. False

Question

With transfer learning, the process of fine-tuning involves freezing a portion of the model and updating other parameters during training.

1. True
2. **False**

Explanation: During fine-tuning, you unfreeze all of the parameters and update them (with a very low learning rate).

Question

You need a larger training dataset with transfer learning than if you trained the model from scratch (assuming you are using the model to achieve the same objective).

1. True
2. **False**

Explanation: Most often, you will need a smaller dataset for transfer learning than what was originally used to train the model.