Here are some exercise questions for candidates on the topic of "Lists" in Python, suitable for homework:

Basic:

1. Create a list of your favorite movies.
2. Create a list of integers from 1 to 10.
3. Create a list of the first 5 letters of the alphabet.
4. Create an empty list and then add 3 different data types to it (e.g., integer, string, boolean).
5. Create a list of 5 colors and print the second and fourth colors.

Intermediate:

1. Given a list of numbers, find the sum of all the numbers.
2. Given a list of strings, concatenate all the strings together.
3. Given a list of numbers, find the largest and smallest numbers.
4. Given a list of names, sort the list in alphabetical order.
5. Given a list of numbers, remove all duplicates from the list.

Advanced:

1. Implement a function to reverse a list without using the built-in reverse() method.
2. Implement a function to find the second largest element in a list.
3. Given two lists, create a new list that contains only the elements that are common to both lists.
4. Given a list of numbers, create a new list that contains only the even numbers.
5. Implement a simple "to-do" list application using lists. Allow users to add, remove, and view tasks.

Tips for the Instructor:

- Adjust difficulty: Tailor the exercises to the skill level of your candidates.
- Provide hints: Offer hints or guidance if candidates are stuck.

- Encourage creativity: Allow for some creative problem-solving and different approaches to the exercises.
- Review solutions: Discuss the solutions in class and provide feedback to the candidates.

Example of an Exercise with a Solution:

Exercise:

Given a list of numbers, find the sum of all the numbers.

Solution:

Python

```
def sum_of_numbers(numbers):
 """
 Calculates the sum of all numbers in a list.

 Args:
  numbers: A list of numbers.

 Returns:
  The sum of all numbers in the list.
 """
 total = 0
 for number in numbers:
  total += number
 return total

# Example usage:
my_list = [1, 2, 3, 4, 5]
result = sum_of_numbers(my_list)
```

```
print("Sum of numbers:", result)  # Output: Sum of numbers: 15
```

I hope these exercises are helpful for your candidates!