1. How do you distinguish between shutil.copy() and shutil.copytree()?

ANS :- `shutil.copy()` is used to copy a single file from one location to another, while `shutil.copytree()` is used to recursively copy an entire directory tree from one location to another, including all subdirectories and files within them.

2. What function is used to rename files?

ANS :- The `os.rename()` function is used to rename files in Python.

3. What is the difference between the delete functions in the send2trash and shutil modules?

ANS :- The `send2trash` module provides a function called `send2trash()` that moves a file or directory to the trash or recycle bin instead of permanently deleting it. This allows for potential recovery of the deleted items.

On the other hand, the `shutil` module provides the `shutil.rmtree()` function to recursively delete a directory and its contents, permanently removing them from the file system without moving them to the trash or recycle bin.

4. ZipFile objects have a close() method just like File objects’ close() method. What ZipFile method is equivalent to File objects’ open() method?

ANS :- The equivalent method to File objects' `open()` method for ZipFile objects is the `ZipFile()` constructor. The `ZipFile()` method is used to create a ZipFile object by specifying the file path and the mode in which the ZIP file should be opened, such as 'r' for reading or 'w' for writing.

5. Create a programme that searches a folder tree for files with a certain file extension (such as .pdf or .jpg). Copy these files from whatever location they are in to a new folder.

ANS :- Here's an example program that searches for files with a specific file extension in a folder tree and copies them to a new folder:

```python

import os

import shutil

def search\_and\_copy\_files(source\_folder, destination\_folder, file\_extension):

for foldername, subfolders, filenames in os.walk(source\_folder):

for filename in filenames:

if filename.endswith(file\_extension):

source\_path = os.path.join(foldername, filename)

destination\_path = os.path.join(destination\_folder, filename)

shutil.copy2(source\_path, destination\_path)

print(f"Copied {filename} to {destination\_folder}")

# Example usage

source\_folder = "path/to/source/folder"

destination\_folder = "path/to/destination/folder"

file\_extension = ".pdf"

search\_and\_copy\_files(source\_folder, destination\_folder, file\_extension)

```