**ANSWERS**

**Q1. To what does a relative path refer?**

**Ans.** A relative path refers to the location of a file or directory relative to the current working directory. It does not start with the root directory but instead provides a path relative to the current location.

**Q2. What does an absolute path start with your operating system?**

**Ans.** An absolute path starts with the root directory of the operating system. On different operating systems, the root directory is represented differently. For example:

* + On Windows: An absolute path starts with a drive letter (e.g., C:) or the UNC path (\server\share).
  + On Unix-like systems (e.g., Linux, macOS): An absolute path starts with a forward slash (/).

**Q3. What do the functions os.getcwd() and os.chdir() do?**

**Ans.** In Python, the os.getcwd() function returns the current working directory as a string. It returns the path of the directory from which the script is currently running.

The os.chdir(path) function is used to change the current working directory to the specified path. It allows you to navigate and operate in different directories within your Python script.

**Q4. What are the . and .. folders?**

**Ans.** In file systems, the **.** (dot) refers to the current directory, and the **..** (dot-dot) refers to the parent directory.

* + The **.** folder represents the current directory itself.
  + The **..** folder represents the parent directory containing the current directory.

**Q5. In C:\bacon\eggs\spam.txt, which part is the dir name, and which part is the base name?**

**Ans**. In the path **C:\bacon\eggs\spam.txt:**

* The directory name **(dir name) is C:\bacon\eggs.**
* The base name is **spa**

**Q6. What are the three “mode” arguments that can be passed to the open() function?**

**Ans.** The three "mode" arguments that can be passed to the **open()** function are:

* + **'r'**: Read mode. Opens the file for reading (default mode). Raises an error if the file does not exist.
  + **'w'**: Write mode. Opens the file for writing. Creates a new file if it doesn't exist or truncates the existing file.
  + **'a'**: Append mode. Opens the file for appending data. Creates a new file if it doesn't exist.

**Q7. What happens if an existing file is opened in write mode?**

**Ans.** If an existing file is opened in write mode (**'w'**), the file's contents are truncated (erased) before any new data is written. If the file does not exist, a new file with the specified name is created.

**Q8. How do you tell the difference between read() and readlines()?**

**Ans.** The **read()** method is used to read the entire contents of a file as a single string. It returns the contents as a single string, including newline characters.

The **readlines()** method is used to read the contents of a file line by line and returns a list of strings. Each string in the list represents a line from the file, including newline characters at the end of each line.

**Q9. What data structure does a shelf value resemble?**

**Ans.** A shelf value in Python resembles a dictionary-like data structure. It is provided by the **shelve** module and acts as a persistent, dictionary-like object that can be used to store and retrieve data from a file. It allows storing key-value pairs in a file, similar to how a dictionary stores key-value pairs in memory.