Q1. Describe the differences between text and binary files in a single paragraph.

Ans: The differences between text and binary files are:

Text files are a special subset of binary files used to store human-readable characters as rich or plain text documents. Text files also store data in contiguous bytes, but the bits in a text file represent characters.

Binary files are common files that store data in the form of byte strings grouped into 8-bits (and sometimes 16-bits). These bits represent user-defined data, and such files can store multiple types of data (images, audio, text, etc.) in one file.

Q2. What are some scenarios where using text files will be the better option? When would you like to use binary files instead of text files?

Ans: Text files are less likely to become corrupted because unwanted changes are only visible after the file is opened and can be easily deleted. Use binary files instead of text files for image data.

Q3. What are some of the issues with using binary operations to read and write a Python integer directly to disc?

Ans: When we read or write a python integer using binary operations

* Binary operations deal with raw data
* One needs to identify how many bytes one would read or write.

Q4. Describe a benefit of using the with keyword instead of explicitly opening a file.

Ans: If you open a file with the with keyword, the file will be automatically closed if an exception occurs after opening the file or at the end of the file. This ensures that the file is never left in open mode and does not need to be explicitly closed.

Q5. Does Python have the trailing newline while reading a line of text? Does Python append a newline when you write a line of text?

Ans: Yes, Python has trailing newlines when reading lines of text. In Python, you have to explicitly specify line breaks when writing.

Q6. What file operations enable for random-access operation?

Ans: The file operations enable for random-access operation are seek() and tell()

Q7. When do you think you'll use the struct package the most?

Ans: The struct package is mostly used while converting common python types into C language types.

Q8. When is pickling the best option?

Ans: Yes, it is best option to create a new binary file in python

Q9. When will it be best to use the shelve package?

Ans: Shelve package is used to pickle data but treats the entire file as a dictionary.

Q10. What is a special restriction when using the shelve package, as opposed to using other data dictionaries?

Ans: This particular Dictionary object allows only string data types as keys, but allows selectable Python objects as values.