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**QUESTION BANK**

**Course Code:** 24BTPHY204/24BTELY205 **Semester: II**

**Course: Programming in Python**

**Module 5**

**Files handling and Regular Expressions**

**1 .Explain how to open a file in Python. Describe the different file modes available for opening a file and explain their use.**

**2.Write a Python program to read the content of a text file and write the content to another file. Demonstrate the use of** read() **and** write() **methods.**

**3.Describe the purpose of the** seek() **method in file handling. Write a Python program to demonstrate the use of** seek() **in reading a file.**

**4.What are binary files? Explain how to read and write binary data in Python with examples.**

**5. What is the role of regular expressions in Python? Explain how the** re.match() **and** re.search() **methods differ with examples.**

8. **Explain the use of** re.sub() **in Python. Write a program to replace all occurrences of digits in a string with a specific character or word.**

**9.** Discuss the importance of the with statement when handling files in Python. Write a Python program to read a file line by line and count the number of lines, words, and characters in the file using the with statement.

10. How can you move the file pointer using the seek() method? Explain the seek() method with an example where you write to a file, seek to a specific location, and then overwrite part of the file content.

1. Discuss the various metacharacters used in regular expressions. Explain how special characters like ^, $, . and \b can be used to match patterns in strings. Write Python code examples for each metacharacter.
2. Define regular expressions? Mention any four functions from the re module with examples.
3. Explain metacharacters in regular expressions and the use of ^, $, \d, and. with examples.
4. Write a Python program to extract all mobile numbers (10-digit) from a given text using regular expressions.
5. Explain the concept of file handling in Python. What are the different file modes?
6. Explain the use of the with statement in file handling with an example.
7. Write a Python program to read a text file and count the number of lines and characters.