**Jaypee University of Engineering and Technology, Guna**

**Department of Computer Science and Engineering**

**Object Oriented Programming (18B11CI211)**

**Assignment-3**

**Question 1** How virtual function is invoked during run time. Explain internal mechanism for virtual function with suitable program and also explain how compiler makes decision to invoke

function on the basis of content of pointer.

**Question 2** Write a C++ program to write the content in file and then ask user to enter line number to delete a specific line from a file. Your program should be able to handle file related errors by showing appropriate error message.

Assume that the content of the file test.txt is:

test line 1

test line 2

test line 3

test line 4

**Test Data :**   
Input the file name to be opened : test.txt   
Input the line you want to remove : 2   
**Expected Output :**

The content of the file test.txt is:

test line 1

test line 3

test line 4

**Question 3** Write a C++ program to encrypt and decrypt a text file.

Assume that, the content of the file test.txt is:

*Welcome to JUET Guna MP.*

**Test Data:**   
Input the name of file to encrypt : test.txt   
Expected Output :

File test.txt successfully encrypted..!!

If you read the file test.txt you will see something garbage like:

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**Decryption:**

Assume that, the content of the file test.txt was:

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The file test.txt decrypted successfully..!!

Now, if you read the file test.txt you will see the following:

*Welcome to JUET Guna MP.*

**Question 4** Give five reasons because of which an exception may be raised in a program? Using ‘try-throw-catch’ mechanism to write a C++ code to handle ‘divide by zero’ exception in a program?