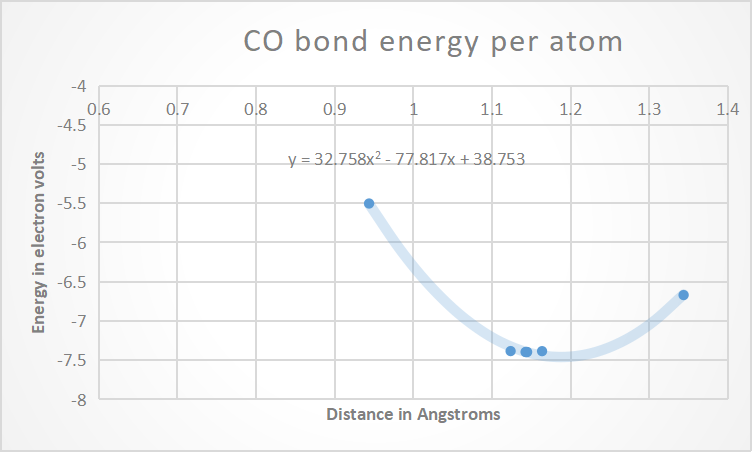
**Hands On Assignment 2**

**Bhuvanesh P – MM19B027**

(i) The graph is given below with equation below it



The equation is given by y = 32.758x2 - 77.817x + 38.753

(ii)

The equation above gives the vibrational frequency of atoms.

We get after double differentiating the energy equation with respect t o distance

= 2 x 32.758 = 65.516

This is not in SI units to convert it we need to multiply by 1.6 X 10-19 in numerator and 10-20 in the denominator

After substituting is given by