#Roshan Chawan 22CV013

# To determine alkalinity of given sample

H2S04\_req = float(input("Enter the volume of H2S04 required in ml:"))

Sample = float(input("Enter the value of sample in litres:"))

Alkalinity\_Removed = H2S04\_req  # Corrected variable assignment

print("Alkalinity Removed: ", Alkalinity\_Removed, "mg")

Alk\_mgperlit = Alkalinity\_Removed / Sample

print("Total Alkalinity:", Alk\_mgperlit, "mg/lit")

OH = float(input("Enter the value of OH-Alkalinity present : "))

# Alkalinity removed till pH of 8.3

H2S04\_req\_pH83 = float(input("Enter the volume of H2S04 required in ml :"))  # Changed variable name to avoid conflict

Alkalinity\_Removed\_pH83 = H2S04\_req\_pH83  # Changed variable name to avoid conflict

print("Alkalinity Removed: ", Alkalinity\_Removed\_pH83, "mg")

CO3\_Combined = Alkalinity\_Removed\_pH83 / Sample  # Changed variable name to match above

print("Carbonate Alkalinity upto pH8.3:", CO3\_Combined, "mgperlit")

CO3 = CO3\_Combined - OH

print("Carbonate Alkalinity:", CO3, "mg/lit")

HCO3 = Alk\_mgperlit - 2 \* CO3 - OH

print("Bicarbonate Alkalinity:", HCO3, "mg/it")

Output-:

Enter the volume of H2S04 required in ml:30

Enter the value of sample in litres:0.2

Alkalinity Removed: 30.0 mg

Total Alkalinity: 150.0 mg/lit

Enter the value of OH-Alkalinity present : 5

Enter the volume of H2S04 required in ml :11

Alkalinity Removed: 11.0 mg

Carbonate Alkalinity upto pH8.3: 55.0 mgperlit

Carbonate Alkalinity: 50.0 mg/lit

Bicarbonate Alkalinity: 45.0 mg/lit