1. **Question5**

**from functools import reduce**

**def check\_pairs(num, a\_list):**

**if num % 2 == 0:**

**return**

**else:**

**a\_list.append(a\_list[num-1])**

**def separate(list1, list2, list3):**

**j = 0**

**while j < len(list1):**

**if j % 2 == 0:**

**list2.append(list1[j])**

**j+=1**

**j = 0**

**while j < len(list1):**

**if j % 2 != 0:**

**list3.append(list1[j])**

**j+=1**

**def cal\_gcd(x, y):**

**while(y):**

**x, y = y, x % y**

**return x**

**def cal\_lcm(x, y):**

**lcm = (x\*y)//cal\_gcd(x, y)**

**return lcm**

**n = int(input("Enter number of elements in the list : "))**

**main\_list = []**

**even\_list = []**

**odd\_list = []**

**for i in range(n):**

**x = int(input(f"Enter element {i} : "))**

**main\_list.append(x)**

**check\_pairs(n, main\_list)**

**separate(main\_list,even\_list,odd\_list)**

**g\_c\_d = reduce(cal\_gcd, even\_list)**

**l\_c\_m = reduce(cal\_lcm, odd\_list)**

**print(f"\nLCM of {odd\_list} is {l\_c\_m} \n\nGCD of {even\_list} is {g\_c\_d}")**