

***Physics Department***

***Physics 112***

**Experiment 7:**

**IMPEDANCE**

**AND**

**REACTANCE**

**Student’s name: Mohammed Nawahda**

**Student’s no. : 1080817**

**Partner’s name: Ibrahim Ahmad Rami**

**Partner’s no. : 1080125**

**Section: 9**

**Instructor: Ismael Badran**

**Abstract:**

* **The aim of the experiment:** is to show the difference and the similarities between VR, VC, VL, also this experiment aims to measure the phase shift between each of them and the driving voltage.
* **The method used:** by using the CRO screen to display the graphs of our circuit which is powered by the signal generator with AC current.
* **The main result:**

**Data:**

C = 0.1µF L= 10 mH R= 1 KΩ

|  |  |  |  |
| --- | --- | --- | --- |
| **Frequancy (KHz)** | **a** | **b** | **Ф = sin-1(a/b)** |
| 0.1 |  |  |  |
| 0.3 |  |  |  |
| 0.5 |  |  |  |
| 0.7 |  |  |  |
| 1.0 |  |  |  |
| 3.0 |  |  |  |
| 4.0 |  |  |  |
| 4.5 |  |  |  |
| 5.0 |  |  |  |
| 5.5 |  |  |  |
| 6.0 |  |  |  |
| 7.0 |  |  |  |
| 10.0 |  |  |  |
| 30.0 |  |  |  |
| 50.0 |  |  |  |
| 70.0 |  |  |  |
| 100.0 |  |  |  |