**International University**

School of Electrical Engineering

**Principle of EE1 Laboratory**

**EE052IU**

**[Lab 5&6]]**

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**GRADING GUIDELINE FOR LAB REPORT**

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| * Table of contents | Yes No |  |
| * Header/Footer | Yes No |  |
| * List of figures (if exists) | Yes No |  |
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**Nomenclature**

VDD = DC Voltage Source

Vdd = AC Volatge Source

Iref = Reference Current

Etc.

**Theoretical Background**

1. RC circuit

**F = 500Hz**

* Period: T (s)

Simulated:

Measured:

* Time delay ∆𝒕 (𝜇s)

Simulated:

Measured:

* Phase shift 𝝋 (°)

Simulated:

Measured:

* C (𝜇F)

Simulated:

Measured:

**F = 750Hz**

* Period: T (s)

Simulated:

Measured:

* Time delay ∆𝒕 (𝜇s)

Simulated:

Measured:

* Phase shift 𝝋 (°)

Simulated:

Measured:

* C (𝜇F)

Simulated:

Measured:

**F = 1000Hz**

* Period: T (s)

Simulated:

Measured:

* Time delay ∆𝒕 (𝜇s)

Simulated:

Measured:

* Phase shift 𝝋 (°)

Simulated:

Measured:

* C (𝜇F)

Simulated:

Measured:

1.2 Determine value of a capacitor by measuring its impedance

**F = 1000Hz**

* Vrms (V)

Simulated:

Measured:

* Irms (A)

Simulated:

Measured:

* |𝒁𝒄|=𝑽𝒓𝒎𝒔 / 𝑰𝒓𝒎𝒔 (Ω)

Simulated:

Measured:

* C (𝜇F)

Simulated:

Measured:

**F = 250Hz**

* Vrms (V)

Simulated:

Measured:

* Irms (A)

Simulated:

Measured:

* |𝒁𝒄|=𝑽𝒓𝒎𝒔 / 𝑰𝒓𝒎𝒔 (Ω)

Simulated:

Measured:

* C (𝜇F)

Simulated:

Measured:

**F = 100Hz**

* Vrms (V)

Simulated:

Measured:

* Irms (A)

Simulated:

Measured:

* |𝒁𝒄|=𝑽𝒓𝒎𝒔 / 𝑰𝒓𝒎𝒔 (Ω)

Simulated:

Measured:

* C (𝜇F)

Simulated:

Measured:

2. RL Circuit

**F = 1000Hz**

* Period: T (s)

Simulated:

Measured:

* Time delay ∆𝒕 (𝜇s)

Simulated:

Measured:

* Phase shift 𝝋 (°)

Simulated:

Measured:

* L (m)

Simulated:

Measured:

**F = 2000Hz**

* Period: T (s)

Simulated:

Measured:

* Time delay ∆𝒕 (𝜇s)

Simulated:

Measured:

* Phase shift 𝝋 (°)

Simulated:

Measured:

* L (m)

Simulated:

Measured:

**F = 4000Hz**

* Period: T (s)

Simulated:

Measured:

* Time delay ∆𝒕 (𝜇s)

Simulated:

Measured:

* Phase shift 𝝋 (°)

Simulated:

Measured:

* L (m)

Simulated:

Measured:

2.2 Determine value of an inductor by measuring its impedance

**F = 1000Hz**

* Vrms (V)

Simulated:

Measured:

* Irms (A)

Simulated:

Measured:

* |𝒁𝒄|=𝑽𝒓𝒎𝒔 / 𝑰𝒓𝒎𝒔 (Ω)

Simulated:

Measured:

* L(mH)

Simulated:

Measured:

**F = 2000Hz**

* Vrms (V)

Simulated:

Measured:

* Irms (A)

Simulated:

Measured:

* |𝒁𝒄|=𝑽𝒓𝒎𝒔 / 𝑰𝒓𝒎𝒔 (Ω)

Simulated:

Measured:

* L(mH)

Simulated:

Measured:

**F = 4000Hz**

* Vrms (V)

Simulated:

Measured:

* Irms (A)

Simulated:

Measured:

* |𝒁𝒄|=𝑽𝒓𝒎𝒔 / 𝑰𝒓𝒎𝒔 (Ω)

Simulated:

Measured:

* L(mH)

Simulated:

Measured:

**Experimental Procedure**

**Experimental Results**

In this section, describe the results. Remember to refer your reader to specific Figures, Tables and Appendices where applicable and show your calculations and data manipulation. Note that it is preferable to have Figures and Tables close to the text where they are discussed. The goal here is to report the results – ***NOT*** to discuss whether they are good or bad results. Usually the trends in a graph are pointed out, but not fully explained. The discussion of the trend is saved for the Discussion section.

**Discussion of Results**

In the discussion, you should point out how your experimental results compare with theory, and suggest and explain reasons for deviations. Discuss the sources of error in this section.