NORTH SOUTH UNIVERSITY

DEPARTMENT OF ELECTRICAL & COMPUTER NGINEERING

Spring 2023
EEE 141L / ETE141L (Sec –19)
Electrical Circuits I Lab

Course Faculty: Mr. Saif Ahmed
Lab Instructor: Md. Rabiul Karim Khan
Senior Lab Instructor (Rank: Assistant Director)
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Office Room: SAC1052
Office Hours: 9:00 – 5:00 (Sun - Thu)
Lab Timing: S 10:20 – 12:30 PM
Room: SAC 504

Lab Classes	Title	Date
Lab Class1	Group Formation, Introduction to equipment and components Verification of Ohm's Law	05/02/2023
Lab Class2	Introduction to Multisim	12/02/2023
Lab Class3	KVL, and Voltage Divider Rule using Series Circuit	19/02/2023
Lab Class4	KCL, Current Divider Rule with Parallel circuit	26/02/2023
Lab Class5	Ladder Circuit.	05/03/2023
Lab Class6	Loading Effect of Voltage Divider Circuit	12/03/2023
Lab Class7	Balanced Bridge Circuit and Delta- Wye Conversion	19/03/2023
No Class	***Holiday-Independence Day***	**26/03/2023**
Lab Class8	Verification of Superposition Theorem, **Mid Term**	02/04/2023
Lab Class9	Verification of Thevenin's Theorem	09/04/2023
Lab Class10	Verification of Norton's Theorem	16/04/2023
No Class	***Holiday- Eid Ul Fitr***	**23/04/2023**
Lab Class11	Verification of Maximum Power Transfer Theorem	30/04/2023
Lab Class12	Charging and Discharging of RC circuits	07/05/2023
Lab Class13	Charging and Discharging of RL circuits	14/05/2023
Lab Class14	Practice	21/05/2023
Lab Class15	Practical Exam and Viva	28/05/2023
Lab Class16	Final Exam (Written)	04/06/2023

Tentative Marks Distribution

Attendance and Lab Performance	20 %
Lab Report	20 %
Mid Term	15 %
Viva	10 %
Practical Exam	10 %
Final Exam (Written)	25 %

Rules

- Arrive in the class on time. Late coming may result in marks deduction.
- Do not leave before the completion of the lab works assigned by the lab instructor. Even then you need permission from the lab instructor to leave before the end of the class.
- Do not go to wash room without the permission from the lab instructor. Going to other places i.e., cafeteria are not permitted.
- Do not talk with the members of other groups.
- You can talk with the members of your own group and the lab instructor about the things related to lab works, and do not gossip. Keep your voice low so that it doesn't disturb others.
- Do not talk using mobile phone. Other use of mobile phones are prohibited.
- Copying of lab reports are not accepted.
- All report submissions are due at the beginning of the class.
- No Late Submissions will be accepted whatever may be the reason.

Lab Report Writing Format

- Cover page
- Objectives
- Apparatus List
- Circuit Diagrams
- Data Table
- Graphs (If may require in the experiment)
- Result Analysis
- Questions and Answers
- Discussion
- Attachment (Signed lab sheet)

Report Writing Guidelines

After completion of a lab experiment, the lab report is due in the next immediate lab class. Each group has to submit a single lab report for each experiment, and every one of the group must have contribution in it. No late submissions allowed. Below is a detailed description of what each lab report must contain:

1. Cover Page - All lab reports should have a cover page and the same cover page should be used for all the lab reports. A sample of a cover page will be provided to you.

2. Objectives – You should briefly write what was the aim of the experiment. In other words, write what you intent to achieve by doing the experiment.

3. Apparatus List – A simple list of all the apparatuses and components you used to do the lab experiment.

4. Circuit Diagrams – Draw the circuit diagrams for the experiment; it should be drawn by pencil but should be clean and legible.

5. Data / Readings – This section of the lab report will contain the data that you have collected practically and it should be presented in a tabular form (make a fresh clean table of the data obtained in class).

6. Graph – Draw graphs if necessary and explain your graph in a clear and precise manner. For instance, you should be able to explain why a part of a graph rises initially and then becomes

7. Result Analysis – This is an important part of the report. You have to explain the results whether they met your objectives or not.

8. Questions and Answers: There are a few report questions that you need to answer.

9. Discussion –This is one of the most important parts of the lab report. What you write here proves how attentive and careful you were during the lab class. Copying a single line from another person's discussion or from a previous lab report will earn you a straight zero.

You must focus on these 4 points:

- What did you learn from the experiment.
- Write whether the data and graph were exactly how you expected from the theoretical knowledge or the practical results were different from theory.
- The problems faced during experiment and a legitimate reason for the possible fluctuation in readings, if any. You can also write about the limitations and drawbacks of the experiment. You also provide any suggestions that you deem fit.

10. Attachment– Finally, you must attach the data sheet signed by the instructor in the lab.
