NATIONAL INSTITUTE OF TECHNOLOGY, JAMSHEDPUR
DEPARTMENT OF ELECTRICAL ENGINEERING

CLASS: B. Tech. (H), V Semester, EEE **Academic Session: AUTUMN-2020**

ELECTRICAL MACHINES−II LAB (EE1506)

CLASS SCHEDULE: THROUGH ONLINE MODE ON EVERY FRIDAY DURING 12.00 NOON -1.00 PM

LIST OF EXPERIMENTS:

Exp. No.	Experiment Name
01	Equivalent circuit of a single phase induction motor
02	Brake test on three phase induction motor
03	Efficiency of a three phase alternator
04	V and inverted V curves of a three phase synchronous motor
05	Study the Variation of Speed and Load Test on Schrage Motor

GUIDELINES FOR LABORATORY NOTEBOOK

The laboratory notebook is a record of all work pertaining to the experiment. This record should be sufficiently complete so that you or anyone else of similar technical background can duplicate the experiment by simply following your laboratory notebook. Record everything directly into the notebook during the experiment. Do not use scratch paper for recording data. Do not trust your memory to fill in the details at a later time. Organization in your notebook is important. Descriptive headings should be used to separate and identify the various parts of the experiment. Record data in chronological order. A neat, organized and complete record of an experiment is just as important as the experimental work.

1. Heading: The experiment identification (number) should be at the top of each page. Your name and date should be at the top of the first page of each day's experimental work.

2. Object: A brief but complete statement of what you intend to find out or verify in the experiment should be at the beginning of each experiment

3. Diagram: A circuit diagram should be drawn and labeled so that the actual experiment circuitry could be easily duplicated at any time in the future. Be especially careful to record all circuit changes made during the experiment.

4. Equipment List: List those items of equipment which have a direct effect on the accuracy of the data. It may be necessary later to locate specific items of equipment for rechecks if discrepancies develop in the results.

5. Procedure: In general, lengthy explanations of procedures are unnecessary. Be brief. Short commentaries alongside the corresponding data may be used. Keep in mind the fact that the experiment must be reproducible from the information given in your notebook.

6. Data: Think carefully about what data is required and prepare suitable data tables. Record instrument readings directly. Do not use calculated results in place of direct data; however, calculated results may be recorded in the same table with the direct data. Data tables should be clearly identified and each data column labeled and headed by the proper units of measure.

7. Calculations: Not always necessary but equations and sample calculations are often given to illustrate the treatment of the experimental data in obtaining the results.

8. Graphs: Graphs are used to present large amounts of data in a concise visual form. Data to be presented in graphical form should be plotted in the laboratory so that any questionable data points can be checked while the experiment is still set up. The grid lines in the notebook can be used for most graphs. If special graph paper is required, affix the graph permanently into the notebook. Give all graphs a short descriptive title. Label and scale the axes. Use units of measure. Label each curve if more than one on a graph.

9. Results: The results should be presented in a form which makes the interpretation easy. Large amounts of numerical results are generally presented in graphical form. Tables are generally used for small amounts of results. Theoretical and experimental results should be on the same graph or arrange in the same table in a way for easy correlation of these results.

10. Conclusion: This is your interpretation of the results of the experiment as an engineer. Be brief and specific. Give reasons for important discrepancies.