**20EE21P3-ELECTRO MECHANICAL ENERGY CONVERSION-I LAB**

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| **Course Category:** | Professional core | **Credits:** | 1.5 |
| **Course Type:** | Laboratory | **Lecture-Tutorial-Practical:** | 0-0-3 |
| **Pre-requisite:** | Basic concepts of Electro Magnetics, Knowledge of DC machines is required. | **Sessional Evaluation:****External Exam Evaluation:****Total Marks:** | 4060100 |

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| **Course Objectives:** | Students undergoing this course are expected to learn : |
| 1. The test performance of DC machines.
2. To Perform load tests on DC Generators.
3. The load testing methods to obtain the performance of DC motors
4. The speed control methods of DC motors
5. To Separate the losses in a DC motor.
6. The assessment of DC machines.
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| **Course Outcomes:** | After completing the course the student will be able to |
| CO1 | Test the performance of DC machines. |
| CO2 | Perform load tests on DC Generators. |
| CO3 | Conduct load tests on DC motors. |
| CO4 | Design to Control the speed of DC motor. |
| CO5 | Distinguish to separate the losses in a DC motor. |
| CO6 | Analyse the assessment of DC machines. |
| **Course Content:** | Minimum of 10 experiments to be conducted out of the following:**List of Experiments**1. Magnetization characteristics of DC shunt Generator
2. Load Test on DC shunt Generator
3. Load Test on DC Compound Generator
4. Swinburne’s Test
5. Brake Test on DC Shunt Motor
6. Brake Test on DC Series Motor
7. Brake test on a DC Compound Motor
8. Speed Control of DC Shunt Motor
9. Hopkinson’s Test
10. Field Test on DC Series Machines
11. Separation of Losses of DC Shunt Motor
12. Retardation Test
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