**UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA**

**Academic lesson plan for summer semester - 2022**

Name of the teaching faculty: **Sandip Mishra**  Discipline / Dept.: **EE**

Semester: **4th** Subject (Practical): **EML-I**

No. of periods per week: **6** Total Periods**: 90**

Semester Exam: **50** Class Test: **25**

Total Marks: **75**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Period** | **UNIT/CHAPTER** | **Topic to be covered** |
|  | 1st | EXPERIMENT 1(A) | . Identification of different terminals of a DC machine by test lamp method |
| 1ST | 2nd |
| 3rd |
| 4th | EXPERIMENT 1(B) | Identification of different terminals of a DC machine by multimeter method. |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 1(c) | Measurement of insulation resistance of a DC motor by megger. |
| 2ND | 2nd |
| 3rd |
| 4th | EXPERIMENT 2 | Dimensional and material study of various parts of a DC machine. |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 3 | Plot OCC of a DC shunt generator at constant speed and determine critical resistance from the graph. |
| 3RD | 2nd |
| 3rd |
| 4th | EXPERIMENT 4 | Plot External Characteristics of a DC shunt generator at constant speed |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 5 | Study of Three point starter, connect and run a DC shunt motor & measure the no load current. |
| 4TH | 2nd |
| 3rd |
| 4th | EXPERIMENT 6 | Study of Four point starter, connect and run a DC compound motor & measure no load current |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 7(A) | Control the speed of a DC shunt motor by field flux control method. |
| 5TH | 2nd |
| 3rd |
| 4th | EXPERIMENT (B) | Control the speed of a DC shunt motor by armature voltage control method. |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 8 | Determine the armature current vs. speed characteristic of a DC motor |
| 6TH | 2nd |
| 3rd |
| 4th | EXPERIMENT 9 | Determine the efficiency of a DC machine by brake test method |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 10 | Identification of terminals, determination of voltage transformation ratio of a single phase transformer. |
| 7TH | 2nd |
| 3rd |
| 4th | EXPERIMENT 11(A) | Perform Open Circuit Test of a single phase transformer. |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 11(B) | Perform Short Circuit test of a single phase transformer. |
| 8TH | 2nd |
| 3rd |
| 4th | EXPERIMENT 12(A) | Determine the voltage regulation of a single phase transformer at Resistive loads. |
| 5th |
|  | 6th |

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| --- | --- | --- | --- |
|  | 1st | EXPERIMENT 12(B) | Determine the voltage regulation of a single phase transformer at Inductive loads. |
| 9TH | 2nd |
| 3rd |
| 4th | EXPERIMENT 13(A) | Polarity test of single phase transformer |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT 13(B) | Parallel operation of two single phase transformers. |
| 10TH | 2nd |
| 3rd |
| 4th | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 11TH | 2nd |
| 3rd |
| 4th | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 12TH | 2nd |
| 3rd |
| 4th | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 13TH | 2nd |
| 3rd |
| 4th | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 14TH | 2nd |
| 3rd |
| 4th | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 5th |
|  | 6th |
|  | 1st | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 15TH | 2nd |
| 3rd |
| 4th | EXPERIMENT for Defaulters or doubt | Any Experiments from the Electrical Machine-1 lab Syllabus |
| 5th |
|  | 6th |

The lesson plan prepared by the concerned faculty.

SANDIP MISHRA

PTGF, ELECTRICAL DEPARTMENT