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|--|-----------------|---------------------|
| Department of Electrical and Electronics Engineering             |                 | LP: EE22311         |
| B.E/B.Tech/M.E/M.Tech : <u>EE</u>                                | Regulation:2022 | Rev. No: 00         |
| PG Specialisation : N/A  |                 | Date:<br>02/08/2023 |
| Sub. Code / Sub. Name : EE22311-ELECTRICAL MACHINES I LABORATORY |                 |                     |

| Session No*   | List of Experiments  |
|---|--|
| <b>CYCLE-I</b>  |  |
| 1   | Open circuit and load characteristics of D.C separately excited generator                                |
| 2   | Open circuit and load characteristics of D.C self-excited shunt generator                                |
| 3   | Load characteristics of D.C. compound generator with differential and cumulative connection              |
| <b>CYCLE-II</b>   |  |
| 4   | Load test of D.C. shunt motor & speed control and its 4 quadrant operation of D.C shunt motor            |
| 5   | Load test of D.C series motor & Swinburne's test on D.C motor  |
| 6   | Load test of DC compound motor and study of starters   |
| <b>CYCLE-III</b>  |  |
| 7   | Hopkinson's test on D.C motor – generator set  |
| 8   | Load test on single-phase transformer.   |
| 9   | Open circuit and short circuit tests on single phase transformer and three phase transformer connections |
| <b>CYCLE-IV</b>   |  |
| 10  | Polarity test and Sumpner's test on transformers   |
| 11  | Separation of no-load losses in single phase transformer   |
| Content beyond syllabus (if any):<br><br>Parallel operation of single-phase transformer |  |

\* Session Duration: 150 minutes



Sub. Code / Sub. Name: EE22311-ELECTRICAL MACHINES-I LABORATORY

**EXPERIMENTS SCHEDULE:**

| Batch/<br>Session | A11/<br>B11       | A12/<br>B12 | A13/<br>B13 | A14/<br>B14 | A15/<br>B15 | A16/<br>B16 | A21/<br>B21 | A22/<br>B22 | A23/<br>B23 | A24/<br>B24 | A25/<br>B25 | A26/<br>B26 |
|-------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1                 | 1                 | 1           | 2           | 2           | 3           | 3           | 1           | 1           | 2           | 2           | 3           | 3           |
| 2                 | 2                 | 2           | 3           | 3           | 1           | 1           | 2           | 2           | 3           | 3           | 1           | 1           |
| 3                 | 3                 | 3           | 1           | 1           | 2           | 2           | 3           | 3           | 1           | 1           | 2           | 2           |
| 4                 | 4                 | 4           | 5           | 5           | 6           | 6           | 4           | 4           | 5           | 5           | 6           | 6           |
| 5                 | 5                 | 5           | 6           | 6           | 4           | 4           | 5           | 5           | 6           | 6           | 4           | 4           |
| 6                 | 6                 | 6           | 4           | 4           | 5           | 5           | 6           | 6           | 4           | 4           | 5           | 5           |
| 7                 | 7                 | 7           | 8           | 8           | 9           | 9           | 7           | 7           | 8           | 8           | 9           | 9           |
| 8                 | 8                 | 8           | 9           | 9           | 7           | 7           | 8           | 8           | 9           | 9           | 7           | 7           |
| 9                 | 9                 | 9           | 7           | 7           | 8           | 8           | 9           | 9           | 7           | 7           | 8           | 8           |
| 10                | 10                | 10          | 10          | 11          | 11          | 11          | 10          | 10          | 10          | 11          | 11          | 11          |
| 11                | 11                | 11          | 11          | 10          | 10          | 10          | 11          | 11          | 11          | 10          | 10          | 10          |
| 12                | MODEL EXAMINATION |             |             |             |             |             |             |             |             |             |             |             |



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## COURSE DELIVERY PLAN - LABORATORY

Sub. Code / Sub. Name: EE22311-ELECTRICAL MACHINES-I LABORATORY

Total class strength: 53

| Roll Numbers      | Batch | Days    | Hours |
|-------------------|-------|---------|-------|
| 1-27              | A1    | Tuesday | 5-7   |
| 28- 47 & 301- 306 | A2    | Tuesday | 5-7   |

**Batch Spilt up for A1:**

| Batch | Roll No | No. of Students |
|-------|---------|-----------------|
| A11   | 1-5     | 5               |
| A12   | 6-10    | 5               |
| A13   | 11-15   | 5               |
| A14   | 16-19   | 4               |
| A15   | 20-23   | 4               |
| A16   | 24-27   | 4               |

**Batch Spilt up for A2:**

| Batch | Roll No     | No. of Students |
|-------|-------------|-----------------|
| A21   | 28-31       | 4               |
| A22   | 32-35       | 4               |
| A23   | 36-39       | 4               |
| A24   | 40- 44      | 4               |
| A25   | 45- 47& 302 | 5               |
| A26   | 302- 307    | 5               |

**Faculty Members:**

**Ms. K. Suganthi (Lab In-charge)**

**Dr. E. Naveen Kumar**



Sub. Code / Sub. Name: EE22311-ELECTRICAL MACHINES-I LABORATORY

Total class strength: 56

| Roll Numbers  | Batch | Days      | Hours  |
|---------------|-------|-----------|--------|
| 48-75         | B1    | Monday    | 5,6,7, |
| 76-93,307-314 | B2    | Wednesday | 5,6,7  |

**Batch Spilt up for B1:**

| Batch | Roll No | No. of Students |
|-------|---------|-----------------|
| B11   | 48-52   | 5               |
| B12   | 53-57   | 5               |
| B13   | 58-62   | 5               |
| B14   | 63-66   | 4               |
| B15   | 67-70   | 4               |
| B16   | 71-73   | 4               |

**Batch Spilt up for B2:**

| Batch | Roll No | No. of Students |
|-------|---------|-----------------|
| B21   | 74-78   | 5               |
| B22   | 79-83   | 5               |
| B23   | 84-88   | 5               |
| B24   | 89-93   | 6               |
| B25   | 308-311 | 4               |
| B26   | 312-314 | 3               |

**Faculty Members:**

**Mr.V.Karthikeyan** (Lab In-charge)



**Dr. C.Kamal**



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## COURSE DELIVERY PLAN - LABORATORY

Sub. Code / Sub. Name: EE22311-ELECTRICAL MACHINES-I LABORATORY

|             | Prepared by   | Approved by   |
|-------------|---|---|
| Signature   |  | <br>2-8-23 |
| Name        | Ms. K. Suganthi<br>Mr. V. Karthikeyan   | Dr. KR. Santha  |
| Designation | AP/EEE  | HoD/EEE   |
| Date        | 02/08/2023  | 02/08/2023  |
| Remarks* :  |   |   |
| Remarks* :  |   |   |

\* If the same lab plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD