Lesson Plan

Name of faculty : Mr. Surender

Discipline : Electrical Engineering

Semester : 8th

Subject : Special Electrical Machines (ET-408E)

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| --- | --- | --- | --- |
| Week | Theory | **Date of Actual covered**  | **Signatures** |
| Lecture Day | Topic (Including assignment / Test) | **Concerned teacher**  | **HOD**  | **DP**  |
| **Unit-I** |
| 1st | 1 | Introduction to Special Electrical Machines |  |  |  |  |
| 2 | Principles and Types of FHP motors |
| 3 | Uses in domestic & industrial applications |
| 4 | Single phase Induction motors |
| 2nd | 5 | Types of single phase Induction Motors. |  |  |  |  |
| 6 | Related Problem Analysis |
| 7 | Different Characteristics of SEM |
| 8 | Qualitative examination |
| 3rd | 9 | Starting of single phase Induction Motors. |  |  |  |  |
| 10 | Running performance of IM |
| 11 | Related Problems Solutions |
| 12 | Assignment 1 |
| **Unit-II** |
| 4th | 13 | Introduction to Linear Induction Motors |  |  |  |  |
| 14 | Different types of LIM |
| 15 | Actuators and its principle of operation |
| 16 | Introduction to LinearLevitated machine |
| 5th | 17 | Different Applications of LLM |  |  |  |  |
| 18 | Permanent magnet motors |
| 19 | Related Problems Analysis |
| 20 | High performance energy efficient machines |
| 6th | 21 | Effect of E.M.F injected into secondary circuits |  |  |  |  |
| 22 | Related quantitative study |
| 23 | Scherbius System |
| 24 | Schrage Motors. |
| **7th** | **1st Minor Test** |
| **Unit-III** |
| 8th  | 25 | Introduction to Special Machines |  |  |  |  |
| 26 | Special Induction Generators |
| 27 | Special Induction Motors |
| 28 | Special Machines associated with wind system |
| 9th | 29 | Special Machines associated with Solar system |  |  |  |  |
| 30 | Special Machines associated with Tidal |
| 31 | Biogas and other non-conventional forms |
| 32 | Applications of SEMs |
| 10th | 33 | Related Problem Analysis |  |  |  |  |
| 34 | Assignment 2 |
| 35 | Minor Test Discussion |
| 36 | Overview about SEM used in nonconventional |
| **Unit-IV** |
| 11th | 37 | Introduction to Synchronous motors |  |  |  |  |
| 38 | Introduction to series universal motors |
| 39 | Stepper motors and its types |
| 40 | Permanent magnet DC Motors |
| 12th | 41 | Permanent magnet AC Motors |  |  |  |  |
| 42 | Working principles of Switch Reluctance motor |
| 43 | Servomotors and its types |
| 44 | Shaded pole motors |
| 13th | 45 | Brushless DC motors |  |  |  |  |
| 46 | Different applications of SEM |
| 47 | Applications in Computers, Electronics field |
| 48 | Communications and Information Technologies. |
| **14th** | **2nd Minor test** |
| 15th | 49 | Related problem Analysis |  |  |  |  |
|  | 50 | Overview about SEMs |
|  | 51 | PPT. |
|  | 52 | Special test and discussion |