**LESSON PLAN: NON-CONVENTIONAL SOURCES OF ENERGY MANAGEMENT**

**Name of the Faculty:**  ANKITA CHAWLA

**Discipline:** Electrical and Electronics Engineering

**Semester:** 7th Semester

**Subject: NON-CONVENTIONAL SOURCES OF ENERGY MANAGEMENT (EEE-417-L)**

**Lesson Plan Duration:** 15 weeks

**Work Load (Lecture) per week (in hours):** Lectures-03

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| WEEK | LECTURE DAY | SYLLABUS |
| 1st | 1st | INTRODUCTION OF CONVENTIONAL ENERGY SOURCES |
| 2nd | USED & GROWTH OF ALTERNATE ENERGY SOURCES |
| 3rd | BASIC SCHEMES & APPLICATION OF DIRECT ENERGY CONVERSION |
| 2nd | 4th | PRINCIPLES OF ENERGY CONSERVATION |
| 5th | ENERGY AUDIT |
| 6th | ENERGY CONSERVATION APPROACH/TECHNOLOGIES |
| 3rd | 7th | CO-GENERATION, WASTE HEAT UTILIZATION, |
| 8th | POWER FACTOR IMPROVEMENT, REGENERATION METHODS, |
| 9th | ENERGY STORAGE, EFFICIENT ENERGY MANAGEMENT TECHNIQUES |
| 4th | 10th | ENERGY MANAGEMENT SYSTEM IN INDIA. |
| 11th | REVISION |
| 12th | MHD GENERATORS : BASIC PRINCIPLE |
| 5th | 13th | GASEOUS CONDUCTION & HALL EFFECT |
| 14th | GENERATOR & MOTOR EFFECT |
| 15th | DIFFERENT TYPES OF MHD GENERATORS |
| 6th | 16th | PRACTICAL MHD GENERATORS APPLICATIONS & ECONOMIC ASPECTS. |
| 17th | THERMO-ELECTRIC GENERATORS |
| 18th | THERMOELECTRIC EFFECTS, THERMOELECTRIC CONVERTERS |
| 7th | 19th | FIGURE OF MERIT, PROPERTIES OF THERMOELECTRIC MATERIALS |
| 20th | BRIEF DESCRIPTION OF CONSTRUCTION OF THERMO ELECTRIC GENERATORS APPLICATIONS & ECONOMIC ASPECTS. |
| 21st | REVISION |
| 8th | 22nd | PHOTO VOLTAIC EFFECT & SOLAR ENERGY |
| 23rd | PHOTO VOLTAIC EFFECT, DIFFERENT TYPES OF PHOTOELECTRIC CELLS |
| 24th | CELL FABRICATION |
| 9th | 25th | CHARACTERISTICS OF PHOTO VOLTAIC CELLS, CONVERSION EFFICIENCY |
| 26th | SOLAR BATTERIES, SOLAR RADIATION ANALYSIS |
| 27th | SOLAR ENERGY IN INDIA |
| 10th | 28th | SOLAR COLLECTOR |
| 29th | SOLAR FURNACES & APPLICATIONS. |
| 30th | REVISION |
| 11th | 31st | FUEL CELLS, PRINCIPLE OF ACTION |
| 32nd | GENERAL DESCRIPTION OF FUELCELLS, CONVERSION EFFICIENCY |
| 33rd | OPERATIONAL CHARACTERISTICS & APPLICATIONS |
| 12th | 34th | LOW LEVEL HYDROPLANTS, |
| 35th | DEFINITION OF LOW HEAD HYDROPOWER, CHOICE OF SITE, CHOICE OF TURBINES |
| 36th | CHOICE OF TURBINES |
| 13th | 37th | WIND POWER |
| 38th | HISTORY OF WIND POWER, WIND MACHINES, THEORY OF WIND POWER |
| 39th | CHARACTERISTICS OF SUITABLE WIND POWER SITES |
| 14th | 40th | BIO MASS ENERGY, CONVERSION PROCESSES |
| 41st | DIFFERENT BIO MASS ENERGY RESOURCES |
| 42nd | ELECTRIC EQUIPMENT |
| 15th | 43rd | PRECAUTIONS AND APPLICATIONS. |
| 44th | REVISION |