

Lesson Plan

Discipline : **Electrical Engineering**
Semester : **1st Semester**
Subject : **PEE**
Lesson Plan Duration : **13-15 Week**

| Week | Theory | | Practical | |
|------|-------------|---|---------------|--|
| | Lecture Day | Topic | Practical Day | Topic |
| | 1 | Introduction, Nature of Electricity, Electric current, | 1 | PRACTICAL-1 Familiarization of basic components/equipment like ammeter, voltmeter, watt meter, resistance, capacitor, inductor, energy meter, power factor meter, CRO, multi-meter etc and their operation, uses . |
| | 2 | Electrical Energy, Electrical power and their unit. | | |
| | 3 | Resistance, conductivity and resistivity, resistance properties. | 2 | PRACTICAL-1 Familiarization of basic components/equipment like ammeter, voltmeter, watt meter, resistance, capacitor, inductor, energy meter, power factor meter, CRO, multi-meter etc and their operation, uses . |
| | 4 | Rating and wattages of Electrical appliances, heating effect of Electrical current. Introduction to Capacitors, capacitance, Variable capacitor, Factors affecting capacitance of a capacitor and its various connections. | | |
| | 5 | Factors affecting capacitance of a capacitor and its various connections. | 3 | PRACTICAL-2 Determine the value of resistance using colour coding method. |
| | 6 | Energy stored in capacitor, Charging and discharging of a capacitor. | | |
| | 7 | Charging and discharging of a capacitor. | 4 | PRACTICAL-2 Determine the value of resistance using color coding method. |
| | 8 | REVISION UNIT-1 | | |
| | 9 | Unit-2 DC Machines Ohm's law with practical implementation. | 5 | PRACTICAL-3 Observation of change in resistance of a bulb in hot and cold conditions, using voltmeter and ammeter |
| | 10 | Definition of DC circuit, types of DC circuits | | |
| | 11 | Concept of voltage source & current source, connections and their conversions. | 6 | PRACTICAL-3 Observation of change in resistance of |

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| | 12 | Concept of voltage source & current source, connections and their conversions. | | a bulb in hot and cold conditions, using voltmeter and ammeter |
| | 13 | Wheatstone Bridge. | 7 | PRACTICAL-4 To charge and discharge a capacitor and to show the graph on C.R.O. |
| | 14 | Kirchhoff's Laws-KVL and KCL. | | |
| | 15 | Kirchhoff's Laws-KVL and KCL. | 8 | PRACTICAL-4 To charge and discharge a capacitor and to show the graph on C.R.O. |
| | 16 | Star – Delta connections and their conversion. | | |
| | 17 | Revision / Problem solutions | 9 | PRACTICAL-5 Verification of laws of capacitors in series and parallel. |
| | 18 | UNIT III Electrostatics & Magneto statics Concepts of Electrostatics, Coulomb's law. | | |
| | 19 | Concept of magnetism, Magnetic field, Magnetic lines of force | 10 | PRACTICAL-5 Verification of laws of capacitors in series and parallel. |
| | 20 | Definition of Electromagnetism, | | |
| | 21 | Magnetic effect of electric current, direction of magnetic field and current. | 11 | PRACTICAL-6 To verify ohm's law by drawing a graph between voltage and current |
| | 22 | Current carrying conductors in a magnetic field and methods to find its direction, applications | | |
| | 23 | Analogy between electric and magnetic circuit. | | |
| | 39 | Introduction to maintenance free batteries. | 20 | PRACTICAL-10 To find the ratio of inductance of a coil having air-core and iron-core respectively and to observe the effect of introduction of a magnetic core on coil inductance. |
| | 40 | Disposal of batteries | | |
| | 41 | Revision / Problem solution | 21 | PRACTICAL-11 Verification of Faraday's law of electromagnetic induction |
| | 42 | REVISION UNIT-1 | | |

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| | 43 | REVISION UNIT-1 | 22 | PRACTICAL-11 Verification of Faraday's law of electromagnetic induction |
| | 44 | REVISION UNIT-2 | | |
| | 45 | REVISION UNIT-2 | 23 | PRACTICAL-12 To obtain BH curve of a magnetic material |
| | 46 | REVISION UNIT-3 | | |
| | 47 | REVISION UNIT-3 | 24 | PRACTICAL-12 To obtain BH curve of a magnetic material |
| | 48 | REVISION UNIT-4 | | |
| | 49 | REVISION UNIT-4 | 25 | PRACTICAL-13 Demonstration of parts of a battery and find the specific gravity of battery, Demonstration of charging and discharging of Battery and measure the terminal voltage during charging and discharging condition. |
| | 50 | REVISION UNIT-5 | | |
| | 51 | REVISION UNIT-5 | 26 | PRACTICAL-13 Demonstration of parts of a battery and find the specific gravity of battery, Demonstration of charging and discharging of Battery and measure the terminal voltage During charging and discharging condition. |
| | 52 | Revision All Unit | | |

Lesson Plan

Discipline : **Electrical Engineering**
Semester : **1st Semester**
Subject : **Fundamental of Information Technology**

Lesson Plan Duration : **13-15 Week**

| Week | Theory | | Practical | |
|------|-------------|--|---------------|---|
| | Lecture Day | Topic (including assignment / test) | Practical Day | Topic |
| | 1 | Brief history of development of computers, Definition of Computer, Block diagram of a Computer, Hardware, Software, Booting: Cold and Hot Booting, | 1 | Browser features, browsing, using various search engines, writing search queries . |
| | 2 | Interaction between the CPU and Memory with Input/output devices, Function of CPU and major functional parts of CPU. | 2 | Visit various e-governance/Digital India portals, understand their features, services offered. |
| | 3 | Memory, Bit, Nibble, Byte, KB, MB, GB, TB, PB, Functions of memory, Use of storage devices in a Computer, List types of memory used in a Computer, Importance of cache memory, CPU speed and CPU word length | 3 | . Read Wikipedia pages on computer hardware components, look at those components in lab, identify them, recognize various ports/interfaces and related cables, etc. |
| | 4 | Understanding browser, Introduction to WWW, efficient use of search engines, awareness about Digital India portals (state and national portals) and college portals. | 4 | Using Administrative Tools/Control Panel Settings of Operating Systems. |
| | 5 | Advantages of Email, Various email service providers, Creation of email id, sending and receiving emails | | |
| | 6 | attaching documents with email and drive. Effective use of Gmail, G-Drive, Google Calendar, Google Sites | | |
| | 7 | Google Sheets, Online mode of communication using Google Meet & WebEx | | |
| | 8 | Introduction to Programming, Steps involved in problem solving, Definition of Algorithm, Definition of Flowchart | | |
| | 9 | Steps involved in algorithm development, differentiate algorithm and flowchart, symbols used in flowcharts | | |
| | 10 | algorithms for simple problems, flowcharts for simple problems | | |
| | 11 | Practice logic building using flowchart/algorithms | | |

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| | 12 | Office Tools like LibreOffice/OpenOffice/MSOffice. | | |
| | 13 | OpenOffice Writer – Typesetting Text and Basic Formatting, Inserting Images, Hyperlinks, Bookmarks, Tables and Table Properties in Writer Introducing LibreOffice/OpenOffice Calc | | |
| | 14 | Working with Cells, Sheets, data, tables, using formulae and functions, using charts and graphics. | | |
| | 15 | OpenOffice Impress – Creating and Viewing Presentations | | |
| | 16 | Inserting Pictures and Tables, Slide Master and Slide Design, Custom Animation. | | |
| | 17 | Introduction to Digital Marketing – Why Digital Marketing, Characteristics of Digital Marketing, Tools for Digital Marketing, | | |
| | 18 | Effective use of Social Media like LinkedIn, Google+, Facebook, Twitter, etc.: Features of Social media | | |
| | 19 | Advantages and Disadvantages of Social Media. Revision of important topics | | |
| | 20 | Class test | | |

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