Lesson Plan

Name of faculty : Puneet Chawla

Discipline : EE

Semester : 5TH

Subject : Electrical Engineering Material

Lesson plan duration : 15 weeks

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Week** | **Lecture** | **Topic (Including Assignment / Test) : Planned** | **Actually covered on**  **(date)** | **Teacher’s**  **Sign** | **HOD’s Sign** | **DP’s**  **Sign** |
| 1st | 1 | Dielectrics: Definitions. Multipole development |  |  |  |  |
| 2 | Electrical dipole |  |  |  |  |
| 3 | General properties of dielectrics |  |  |  |  |
| 2nd | 4 | Fundamental equation of dielectrics |  |  |  |  |
| 5 | Dielectric sphere |  |  |  |  |
| 6 | Energy and forces acting on the dielectrics |  |  |  |  |
| 3rd | 7 | Polarization mechanisms in dielectrics |  |  |  |  |
| 8 | induced, orientation, electronic, ionic, and interfacial and lattice polarizations |  |  |  |  |
| 9 | combined mechanisms |  |  |  |  |
| 4th | 10 | Magnetic materials Classification of material-dia, para, and Ferro-magnetic materials |  |  |  |  |
| 11 | applications Magnetic Properties of materials |  |  |  |  |
| 12 | Magnetic dipole moment of current loop |  |  |  |  |
| 5th | 13 | Magnetization from a macroscopic viewpoint |  |  |  |  |
| 14 | Orbital magnetic dipole moment and angular momentum of two simple atomic models |  |  |  |  |
| 15 | Lenz’s law and induced dipole moments. Classification of magnetic materials |  |  |  |  |
| 6th | 16 | Classification of magnetic materials. |  |  |  |  |
| 17 | Conducting materials: Types of Conducting Materials |  |  |  |  |
| 18 | Low Resistivity Materials, and High Resistivity Materials |  |  |  |  |
| **7th** |  | **1stSessionals** |  |  |  |  |
| 8th | 19 | Contact Materials |  |  |  |  |
| 20 | Fusible (or Fuse) Materials |  |  |  |  |
| 21 | Filament Materials |  |  |  |  |
| 9th | 22 | Carbon as Filamentary and Brush Material |  |  |  |  |
| 23 | Conductors, Cables, and Wires: Types and Materials |  |  |  |  |
| 24 | Types and Materials, Solder Materials for Joining Wires |  |  |  |  |
| 10th | 25 | Joints in Power Apparatuses |  |  |  |  |
| 26 | Sheathing Materials, Sealing Materials |  |  |  |  |
| 27 | Insulating materials: Gaseous materials-Oxide gases |  |  |  |  |
| 11th | 28 | electronegative gases |  |  |  |  |
| 29 | hydrocarbon gases |  |  |  |  |
| 30 | Liquid materials-mineral oils |  |  |  |  |
| 12th | 31 | silicon liquids |  |  |  |  |
| 32 | hydrocarbon liquids |  |  |  |  |
| 33 | Solid materials-Paper and boards |  |  |  |  |
| 13th | 34 | Resins (Polymers) |  |  |  |  |
| 35 | Rubbers-natural and synthetic |  |  |  |  |
| 36 | Rubbers-natural and synthetic |  |  |  |  |
| **14th** |  | **2ndSessionals** |  |  |  |  |
| 15th | 37 | glass, ceramics |  |  |  |  |
| 38 | asbestos |  |  |  |  |
| 39 | Revision |  |  |  |  |