**Lesson Plan**

Name of faculty : EE-I

Discipline : Electrical Engineering

Semester : 8th

Subject : ELECTRIAL ENGINEERING MATERIALS & PROCESSES (ET-404-E)

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Theory | **Date of Actual covered**  | **Signatures** |
| Lecture Day | Topic (Including assignment / Test) | **Concerned teacher**  | **HOD**  | **DP**  |
| 1st | 1 | Conductors |  |  |  |  |
| 2 | Properties of Conductors |
| 3 | ACSR  |
| 4 | High resistivity material |
| 2nd | 5 | Properties of High resistivity material |  |  |  |  |
| 6 | Alloys |
| 7 | Soldering materials |
| 8 | Brazing materials |
| 3rd | 9 | Super conductivity |  |  |  |  |
| 10 | Super conductor materials |
| 11 | Applications of Super conductor materials |
| 12 | Assignment on conductors |
| 4th | 13 | Insulators  |  |  |  |  |
| 14 | Classification of insulators |
| 15 | Dielectric materials |
| 16 | Glass & ceramics |
| 5th | 17 | Refractory materials |  |  |  |  |
| 18 | Uses of refractory materials |
| 19 | Optical fibers |
| 20 | Lasers & optoelectronic materials |
| 6th | 21 | Semiconductor materials |  |  |  |  |
| 22 | Properties of semi-conductor materials |
| 23 | Thermosetting materials |
| 24 | Thermoplast materials |
| **7th** | **1st Minor Test** |
| 8th  | 25 | Classification of material |  |  |  |  |
| 26 | Diamagnetic materials  |
| 27 | Paramagnetic materials |
| 28 | Ferromagnetic materials  |
| 9th | 29 | Curie law |  |  |  |  |
| 30 | Curie weiss law (Qualitative study) |
| 31 | Ferromagnetism  |
| 32 | Qualitative study of domain theory |
| 10th | 33 | Hysteresis phenomena |  |  |  |  |
| 34 | Hard & soft magnetic material & their applications |
| 35 | Ferrites  |
| 36 | Structure & property of ferrites |
| 11th | 37 | Processes used in Plano technology |  |  |  |  |
| 38 | Lapping |
| 39 | Polishing |
| 40 | Cleaning |
| 12th | 41 | Masking |  |  |  |  |
| 42 | Photolithography |
| 43 | Diffusion |
| 44 | Oxidation & Metallization |
| 13th | 45 | Welding wire bonding |  |  |  |  |
| 46 | Packaging & encapsulation |
| 47 | Heating |
| 48 | Induction & dielectric  |
| **14th** | **2nd Minor test** |
| 15th | 49 | Electron beam welding |  |  |  |  |
|  | 50 | Cutting |
|  | 51 | Allnealing |
|  | 52 | Cold & hot rolling |