**RJLB Govt. Polytechnic, Loharu**

***LECTURE PLAN (FEB.-JUNE. 2024)***

**BRANCH:** ME **SEMESTER: 2nd**

**SUBJECT:** MED-I

**NAME OF FACULTY**: ANKIT PANGHAL

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| **S.****No.** | **Name of Topic** | **No. of Lectures** |
| **Chapter -1- Detail and Assembly Drawing** |
| 1 | Principle and utility of detail and assembly drawings, Practical exercise on drawing from detail to assembly or vice versa  | 2 |
| 2 | using different wooden joints as example (lap joint – T joint and corner joint, Mortise and tenon joint, Bridle joint, Mitre faced corner joint). | 1 |
| **Chapter -2- Threads** |
| 1 | Nomenclature of threads, types of threads. Single and multiple start threads, right hand and left hand thread | 1 |
| 2 | Forms of various external thread sections such as V thread (Metric thread, British associate, American thread, Basic whitworth thread), | 1 |
| 3 | Square, Acme, Knuckle, and Buttress thread. Simplified conventional representation of V thread. | 1 |
| **Chapter -3- Nuts and Bolts** |
| 1 | Different views of hexagonal and square headed nuts and bolts. | 1 |
| 2 | Assembled view of nuts and bolts with washers. | 1 |
| 3 | Foundation bolt- Rag bolt, Hook bolt. Lewis bolt, Eye bolt and curved bolt ( Free hand) | 2 |
| **Chapter -4- Locking Devices** |
| 1 | Locking nuts - Castle nut, Sawn nut, and Split pin lock nut. Locking by spring washers, Locking plates. | 2 |
| **Chapter -5- Screws, Studs and Washers** |
| 1 | Drawing of various types of machine and set screws. | 2 |
| 2 | Drawing of various types’ of studs, through bolt, tap bolt and stud bolt. | 1 |
| **Chapter -6- Keys and Cotters** |
| 1 | Various types of keys and their application. Preparation of drawings of various keys and cotters. | 2 |
| 2 | Various types of joints (a) Gib and Cotter joint (b) Knuckle joint (c) Spigot and Socket joint | 3 |
| **Chapter -7- Rivets and Riveted Joints** |
| 1 | Types of general purpose rivet heads (Snap Head, Pan Head, Flat and counter sunk). Types of riveted joints – lap (single and double riveted), | 2 |
| 2 | butt (single cover plate and double cover plate), chain and zig-zag riveting (Double riveted). Caulking and fullering operation of riveted joints. | 3 |
| **Chapter -8- Shaft Coupling** |
| 1 | Introduction to coupling, their uses and types, Muff Coupling, | 1 |
| 2 | Protected type flange coupling. Flexible or non-rigid coupling | 2 |
| **Chapter -9- Computer Aided Drafting (CAD)** |
|  | Introduction, Various 2 D commands – Draw, modify and option commands, | 2 |
|  | one drawing each from wooden joint, threads, nut and bolts, coupling. | 4 |