

Preface

Engineering Drawing is an important subject, the knowledge of which is not only necessary for Engineers and Technicians but it is an essential requirement for all skilled-workers connected with various Engineering fields. Because, in the absence of the knowledge of Engineering Drawing, they will not be able to understand the construction and circuitry of the equipment/instruments, electronic and computer gadgets and their components / peripherals and other computer applications. Therefore, with learning and understanding the Engineering Drawing subject, they will only be able to assemble or repair such equipments with the help of the relevant drawings.

In fact, Engineering Drawing is an independent 'Language' which possesses its own 'Script and Grammar', that is why it is called 'Engineer's Language'. Moreover, in order to understand and read a drawing, it is not necessary that one should have knowledge of any specific language.

The syllabus of Engineering Drawing for the trades 'Information and Computer Technology System Maintenance' and 'Information Technology' is re-designed by DGT, Govt. of India in the year 2015.

The examination pattern for 3rd and 4th Semesters will be of conventional type (not multiple choice questions type), i.e., the trainees will have to draw drawings for the questions asked in the examination paper.

It is hoped that the trainees will definitely be benefited with this book. Any possible mistake in presentation, printing or editing of the book and suggestions for their removal will be suitably acknowledged.

— ***Vishnu Priya Singh***

Contents

Mentor Council Re-designed Syllabus for Engineering Drawing for I. & C.T.S.M. and I.T. (Semester - 3 and 4) Under CTS

Semester-3

1. **Tools Used in Computer Maintenance** 1–4
Tools used in computer maintenance such as Crimping tools, Punching tools, Soldering iron etc.
2. **Block Diagrams of a Personal Computer** 5–14
Personal Computer, Monitor using CRT (Cathode Ray Tube), LCD, LED, Scanner, UPS, SMPS, Printers (Inkjet, Deskjet and Laser)
3. **Layout Diagrams of Computer Components** 15–21
Cables, Connectors, Expansion Cards, CPU, CPU Sockets, Motherboard.
4. **Polarity Diagrams of RAM (Random Access Memory)** 22–24
Different types of computer RAM Modules
5. **Pin Layout Diagrams of PC and Networking** 25–28
Different types of cables & connectors used in computer system & associated peripheral & network

Semester-4

1. **Block Diagrams of Computer Networking** 1–10
Network Topologies, OSI Model, TCP/IP Suite, Client-Server Network, Network Devices- Modem, Router, Switch, Repeater
2. **Internal View of Mobile, Laptop and Tablet PC** 11–18
Mobile Phones, Smart Phones, Laptop, Tablet PC
3. **Conceptual Diagrams of Bluetooth, Wi-Fi Etc.** 19–30
Bluetooth, Wi-Fi Network, Security, Internet working, Connections with LCD/LED Projector with computer
4. **Internal Connections of Lab Network and Network Devices** 31–38
Lab Network, Method of connecting Network devices, LAN setup using Modem
5. **Internet Setup Diagrams** 39–44
Networking block diagram of computers with different network components, Free hand sketches of straight & cross cables used in networking, Setup diagram of modem-based internet connection, Setup diagram of wi-fi internet connection

Assignment — Test / Solved

- A. **Assignment— Test / Solved (Semester - 3)** 1–10
- B. **Assignment— Test / Solved (Semester - 4)** 11–24