

## MODULE 4. ELECTRONIC FUNDAMENTALS

### 4.1 Semiconductors

#### 4.1.1 Diodes

Diode symbols;

Diode characteristics and properties;

Diodes in series and parallel;

Main characteristics and use of silicon controlled rectifiers (thyristors), light emitting diode, photo conductive diode, varistor, rectifier diodes;

Functional testing of diodes.

#### 4.1.2 Transistors

Transistor symbols;

Component description and orientation;

Transistor characteristics and properties.

#### 4.1.3 Integrated Circuits

Description and operation of logic circuits and linear circuits/operational amplifiers.

### 4.2 Printed Circuit Boards

Description and use of printed circuit boards.

### 4.3 Servomechanisms

Understanding of the following terms: Open and closed loop systems, feedback, follow up, analogue transducers;

Principles of operation and use of the following synchro system components/features: resolvers, differential, control and torque, transformers, inductance and capacitance transmitters.