

# DIPLOMA IN INDUSTRIAL TECHNICIAN

Sponsored by

**SEIMENS**

## MODULE 1

### **1.1 POWER SYSTEM**

#### **Types of Sources**

Renewable Sources

Non – Renewable Sources

Generation

Transmission

### **1.2 DISTRIBUTION SYSTEM**

Generating Station

Distribution Station

Primary Power Distribution

Secondary Power Distribution

Consumer/ Feeder

### **1.3 COMPONENTS**

Transformer

Prime Mover

Bus bar

### **1.4 CALCULATIONS**

### **1.5 STANDARDS**

### **1.6 COMMON TERMS**

## MODULE 2

### **2.1 SWITCHGEARS/ PROTECTIVE DEVICES**

Air Circuit Breaker

Oil Circuit Breaker

Moulded Current Circuit Breaker

Residual Current Circuit Breaker

Switch Disconnecter Fuse + HRC Fuse

Switch Disconnectors

Relays

## MODULE 3

### **3.1 AC – DC DRIVES**

### **3.2 BASICS OF POWER ELECTRONICS & CONCEPTS OF DRIVES**

### **3.3 BASICS ON DC MOTOR & DC DRIVES**

6RA80 DC Drive

### **3.4 BASICS OF AC MOTORS & AC DRIVES**

3 Phase Induction Motor

AC Drives Selections & Applications

AC Drives Options & Features

### **3.5 SINAMICS AC DRIVES**

AC Drives

G120 Demo Kit

### **3.6 MEDIUM VOLTAGE (MV) DRIVE SYSTEM**

#### **3.7 MV Motors**

#### **3.8 MV Convertors**

#### **3.9 MV Transformers**

## **MODULE 4**

### **4.1 PROCESS INSTRUMENTATION (PI)**

Introduction of Pi

Pressure Transmitter

Temperature Transmitter

Flow Transmitter

Level Transmitter

## **MODULE 5**

### **5.1 PROGRAMMABLE LOGIC CONTROLLER (PLC)**

#### **5.2 INTRODUCTION OF PLC**

#### **5.3 SIMATIC STEP 7**

Programming Languages

Integrated Circuits

Set & Reset

Data Types

Timers

Counters

Different types

Different types of Faults

Diagnostics