

**DETAILED SYLLABUS FOR THE POST OF SKILLED ASSISTANT GR II I N**  
**ELECTRICAL INSPECTORATE.**

**(CATEGORY NOS:014/2024)**

**(TOTAL MARKS - 100)**

**Module - 1 (10 Marks)**

**Basic Electricity**

Fundamental Of Electricity  
Flux and soldering technique  
Property of Resistance  
Conductor, Insulator, Semiconductor  
Types of wires and cables

**Module - 2 (10 Marks)**

**Ohm's Law**

Ohm's law, Kirchoff's law  
Effects of variation of temperature on resistance  
Chemical effect of electric current  
Laws of resistance  
Different type of cells  
Grouping of cells  
Care and maintenance of cell  
Buckling, Sedimentation

**Module - 3 (10 Marks)**

**Magnetism**

Classification of magnetic properties  
Para, dia and ferromagnetic material  
electromagnetism, Fleming's left and right hand rule  
MMF, Flux density, Reluctance  
Faraday's laws of electromagnetic induction, Len'z law  
Capacitor, types and functions

**Module - 4 (10 Marks)**

**Alternating current and Earthing**

Alternating current, Earthing  
Types of wiring both domestic and industrial  
Grading of cable and wires  
Current rating, Testing of installation by megger

**Module - 5 (10 Marks)**

**DC Machine**

DC Generators and Type

emf equation

Description of series, shunt and compound Generator

DC motors and type

Starters 3 point, 4 point and speed control machine

**Module - 6 (10 Marks)**

### **AC Motors, single and 3 phase**

AC motors and starters single phase and 3 phase

DOL, Star delta, slip ring motor starter

Auto transformer starter

AC motor panel wiring

phase sequence

**Module - 7 (10 Marks)**

### **Instruments and Transformers**

Measuring Instruments, Indication type and Deflecting types

Controlling torque and Damping Torque

Basic principle of Transformer, emf equation of transformers

parallel operation of Transformers

Cooling, Protective Device

**Module - 8 (10 Marks)**

### **Illumination and Basic Electronics**

Illumination – Laws of illumination

Type of lamp, Domestic appliances

Semiconductor – P type, N Type

classification of Diode, Rectifier, Transistor

**Module - 9 (10 Marks)**

### **Power Generation**

Generation Source of energy

Various types of power generation

**Module - 10 (10 Marks)**

### **Transmission**

Transmission and Distribution

comparison of AC and DC transmission

***NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of***

*the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper*