

**DETAILED SYLLABUS FOR THE POST OF TRADESMAN (eLECTRICAL) IN  
TECHNICAL EDUCATION (Cat.No.: 758/2021)**

**ARMATURE WINDER IN KERALA STATE WATER TRANSPORT  
(Cat.No.: 100/2022)**

**ELECTRICIAN IN SPORTS AND YOUTH AFFAIRS DEPARTMENT  
(Cat.No.: 152/2022)**

**(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 pannel 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.**