DETAILED SYLLABUS FOR THE POST OF LINEMAN-PWD(ELECTRICAL WING)/TECHNICIAN(ELECTRICIAN-KCMMF LTD)

(CATEGORY NOS: 032/2025,101/2025,102/2025)

(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