FURTHER DETAILS REGARDING MAIN TOPICS OF

PROGRAMME No. 05/2020

(Item No: 33, 34, 35, 36, 37, 38, 39, 40, 41)

Category Number: 61/19, 412/19, 506/19, 542/19, 543/19, 196/19, 200/19, 209/19, 326/19

Module - 1

Basic Electricity

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

Module - 2

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

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

**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

**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

**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

**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

**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

**Power Generation**

Generation Source of energy  
Various types of power generation

Module - 10

**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