

Syllabus NE-08

Maintainer/Electrician

General English

- Sentence Correction/error detection
- Synonyms
- Antonyms
- Active/Passive
- Direct/Indirect Speech
- Answer question given in passage
- Functional grammar related questions
- Meaning of Idioms & Phrase
- Fill in the blanks with suitable word

Subject :Electricians

- **Occupational Safety and Health** Basic safety introduction, Personal protection.

Fundamental of electricity. Electron theory-free electron, Fundamental terms, definitions, units and effects of electric current
- **Ohm's Law, Kirchoff's Laws and applications.**

Introduction of National Electrical Code, Voltage grading of different types of Insulators

Common Electrical wiring Accessories, their specifications in line with NEC -Explanation of switches, lamp holders, plugs and sockets.
- **Faraday's Law of electrolysis.** Basic principles of Electroplating and Electro chemical equivalents. Concept of Frequency, Peak factor, form factor.

A.C. circuits, single phase and three-phase system etc.
- **Earthing** - Principle of different methods of earthing. i.e. Pipe, Plate, etc
- **Basic electronics**- Semiconductor energy level, atomic structure 'P' type and 'N' type.
- **Amplifiers.** – Class A, B and C, Power amplifier.
Introduction of basic concept of ICs, U.J.T., F.E.T.

- **Digital Electronics** -Binary numbers, logic gates and combinational circuits, Electric wirings & Voltage drop concept.

- **D.C. Machines** - General concept of Electrical Machines.Principle of D.C. generator.
- **DC Motors** - Terms used in D.C. motor-Torque, Brake Torque, speed, Back-e.m.f. etc.

Working principle of Transformer.

- **Electrical Measuring Instruments** -- types, indicating types.
- **Three phase Induction motor** –Working principle
- **POWER GENERATION:** Generation sources of energy, Comparison of energy resources.
- **TRANSMISSION OF ELECTRICAL POWER:** Electrical Supply System: Comparison of AC and DC transmission.