

**Syllabus for Basic Engineering Discipline
(For Prelim – ARS Examination)**

Mechanical engineering subjects like thermodynamics; their laws and availability, power plant engineering with properties of steam and related topics, IC engines and automobiles, refrigeration and air-conditioning, convection and radiation; fluid mechanics and machinery; theory of machines and vibration etc.

Topics related to electrical engineering such as; Basic Circuit Analysis, Control systems, Transformers DC Machines, AC Machines, Power generation, Transmission and Distribution, Measuring Instruments including digital types, Basic electronics, Electro-magnetic and Microprocessors.

Knowledge of Semiconductor devices, diode application, amplifiers and oscillation, digital electronics such as; transistor as switch, logic gates, flip flops etc., Radio-electronics including preliminary introduction to satellite and optical communication, lab instruments of measurements, Automatic control.

General Knowledge on basic textile science, polymer science, chemistry of polymer, Fibre and polymer common uses, natural vs. synthetic fibres, Dyeing science and technology, printing of textiles, manufacturers of textiles, processing of yarns, dyes and pigments, textile designs and the growth of textile industry in India.

Note: NET certificate will not be issued in Basic Engineering Discipline.