Electronics and communication

DIPLOMA STANDARD

ELECTRONIC DEVICES AND COMPONENTS:-
Conductors-Insulators, Semiconductors-Energyband theory, Semiconductor devices - PN Junction diode, Zener diode, Bipolar Junction, transistor, Field effect transistor, Unijunction transistor, silicon controlled rectifier, Opto electronic devices, Components - Resistors, Inductors and Capacitors.

ELECTRICAL CIRCUTS AND MACHINES:-
Basic electricity - Magnetic circuits-capacitors - A.C. circuits - Resonance - Network theorems - transformers - D.C. Machines-Types of Generators - A.C. Machines - synchronous machines - Induction motors.

PROGRAMMING AND APPLICATIONS OF COMPUTERS:-
Classification of computers - various Input devices. output devices and memory units - computer codes - simple programs in BASIC, SMART work for PCB circuits.

ELECTRONIC CIRCUITS:-
Bias and Bias stability-BJT amplifiers, FET amplifiers-power amplifiers - feedback amplifiers and oscillators -waveshaping and sweep circuits - power supplies and voltage stabilizers.

MICRO ELECTRONICS:-
Switching algebra and logic gates - fabrication of Integrated circuits - Digital logic families - sequential logic circuits - operational amplifiers - its applications - voltage regulation - voltage comparators - phase locked loop - timer I.C.S - D/A convertors - A/D convertors.

NETWORK, ANTENNA AND PROPAGATION:-
Four terminal networks-equalizers and attenuators-filters-transmission lines-Distortionless line-waveguides-Antennas-Propagation.

MEASUREMENT AND INSTRUMENTS:-
Electrical indicating Instruments-D.C. bridges-RLC bridges-signal Generators-Oscilloscopes-Recorders and Transducers-Electronic indicating instruments-Digital voltmeter-digital frequency counter.

COMMUNICATION ENGINEER AND SYSTEM:-
Electro Acoustic transducer-Types of modulation-AM, FM, Pulse modulation- its types, transmitters - receivers. Telephony and Telegraphy-fascimile-microwave devices-Radar systems-digital communication - microwave and satellite communication - optical communication.

MICROPROCESSOR AND ITS APPLICATIONS:-
Introduction to microprocessors - organization of 8085 micro processor - programming of microprocessor - timing sequences - data transfer methods - peripheral interfacing techniques - applications.

TELEVISION ENGINEERING:-
Television fundamentals-various standard- specification of CCIR-B, TV camera tubes and picture tubes - TV transmitters-TV receiver circuits-colour television-Block diagrams-applications of T.V.- video cassette recorder - telecine equipment - special effect generator.