MULTI DISCIPLINARY COURSE (MDC) FOR 4 YEARS CBCS UNDERGRADUATE PROGRAMME

MDCCBCS 2: Acquaintance of Electrical and Electronic Appliances

Course Title	Credit		Credit Distribution	
		Theory	Tutorial	Practical
Acquaintance of Electrical and Electronic Appliances	3	3	1	0

Unit – I

Circuit Fundamental: **(10 Hours)**

Concepts of Work, Energy & Power, Voltage, Current, Electrical Power, Short circuit, open circuit, Ohm's Law.

Concept of Resistance, Capacitance, Inductance, Series & Parallel Combination of Resistances

Active & Passive circuit Elements, Color Code for Resistors, Checking Resistances with ohm meter.

Multimeter, Self & Mutual Inductances and their SI units. Parallel Plate Capacitor, Series and Parallel combination of Capacitances, Measuring Resistances, Capacitances and Inductances using Multimeter

Unit – II **(10 Hours)**

Concept of Alternating Current, Sine wave,

Differentiation between AC and DC currents.

Power socket, Identifying the phase, neutral, earth on power socket.

Unit – III **(10 Hours)**

Electronic Devices:

Semiconductors, N-type and P-type Semiconductors,

Semiconductor Diode, Transistor, LED and their circuit

IC, PCB, bread Board, use a tester to monitor AC power, soldering, Concept of Fuse, definition of an analog circuit, Differention between Analog and Digital circuits, symbols

Unit – IV **(10 Hours)**

Principles and working of Refrigerator, Fan, Tube light, Washing Machine, Geyser and other household appliances.

References:

A Course in Electrical. & Electronics Measurements &Instrumentation-AK. Sawhney, (,Dhanpatrai & Co.) 1978

Suggested Evaluation Methods

Internal Assessment: (30 Marks

Class Participation: 05 Marks

Seminar/presentation/assignment/quiz/class test etc: 10 Marks

Mid-Term Exam: 15 Marks