

FYJC ELECTRONICS –I SYLLABUS

Sr . N o .	Chapter Name	Syllabu s
1.	Basic Electricity	<i>/.</i> Sources of electrical power. <i>//.</i> Internal Impedance of source. <i>///.</i> Concept of voltage & current source. <i>/V.</i> Electrical power.
2.	Network Theorems	<i>/.</i> Kirchoff's current & voltage law. <i>//.</i> Thevenin's Theorem. <i>///.</i> Norton's Theorem. <i>/V.</i> Maximum power transfer Theorem.
3.	AC Fundamentals	<i>/.</i> Generation of AC, the sine wave , alternating current. <i>//.</i> Voltage and current values for a sine wave. <i>///.</i> Amplitude, Frequency, Period, Wavelength, Phase angle, Time factor in Frequency &Phase. <i>/V.</i> Non-Sinusoidal AC waveforms, 50 Hz AC power time (Phase , neutral and ground). <i>V.</i> Concept of Impedance & Reactance.



4.	Electrical Instruments	<i>/.</i> Permanent magnet moving coil mechanism (PMMC). <i>//.</i> DC ammeters.
		<i>///.</i> DC voltmeters. <i>/V.</i> Multi range ammeter & voltmeter.
5.	Study of Components-I	<i>/.</i> Resistors: Fixed and moveable. <i>//.</i> Capacitors: Concept of capacitance, different types of dielectrics, electrolytic & Non-Electrolytic types & their properties. <i>///.</i> Series & Parallel combination of capacitors. <i>/V.</i> Charging & discharging of capacitors. <i>V.</i> Concept of time constant.
6.	Study of Components-II	<i>/.</i> Transformer : transformer equation, turn ratio, types of transformers and it's application. <i>//.</i> Relay: Construction and operation of electro-magnetic relay. <i>///.</i> Switches: Study of different types of switches. <i>/V.</i> Batteries: Rechargeable cells, NiCd and Li cells, solar cells.



FYJC ELECTRONICS SYLLABUS (PAPER 2)

Sr. No	Name of the chapter	Contents
1	Study of semiconductors	a) Characteristics of conductors, non-conductors and semiconductors b) Intrinsic and extrinsic semiconductors c) P-N junction and its forward and reverse bias characteristics d) P-N junction diode and its characteristics e) Types of rectifiers using semiconductor diode
2	Study of Transistors	a) NPN and PNP transistors b) Alpha and Beta of transistors c) C-B, C-C, C-E types of amplifiers d) Output characteristics of C-E type e) Biasing methods of C-E amplifier f) Single stage C-E amplifier g) Multi stage amplifiers
3	Study of semiconductor components	a) Different types of diodes b) UJT, MOSFET transistors
4	Oscillators	a) Basic concept of Oscillators b) Different types of Oscillators

