

COURSE PLAN

Name of the Course Teacher : G.Iyyakutti Iyappan
Subject : Electronics devices and circuits I
Branch : E&C
Semester : II
Year : I
Course Code : EC 102
L-T-P-C : 3-1-1 w.e.f. 29.12.2009

Sr. No.	Topic	Contact Hours (Lectures)
1.	Band structure of p-n junction and current components	2
2.	Quantitative theory of P-N diode	1
3.	Volt-ampere characteristics and its temperature dependence Narrow-base diode	2
4.	Transition and diffusion capacitance of P-N junction diodes	1
5.	Break down of junctions on reverse bias, Zener and Avalanche breakdowns, Tunnel diode and its V-I characteristics	2
6.	Use of diodes in rectification circuits	2
7.	Clipping and clamping circuits	2
8.	PNP and NPN junction transistors, Characteristics of the current flow across the base regions, Minority and majority carrier profiles	2
9.	Transistor as a device in CB and their characteristics	1
10.	Transistor as a device in CE and CC, their characteristics	1
11.	Transistor biasing: DC bias and stabilization	1
12.	Various stabilization circuits, Thermal runaway and thermal Stability, Bias compensation Techniques	2
13.	JFET and its characteristics. Pinch off voltage and drain saturation current	1
14.	MOSFET- enhancement, depletion modes	1
15.	FET biasing	1
16.	Equivalent ckt of FET, low frequency FET Amplifiers	2
17.	Transistor hybrid model using 'h' parameters	1
18.	Analysis of CB,CC,CE configuration	3

19.	Miller's theorem, Darlington Emitter follower, Boot strapping Darlington pair	1
20.	Cascaded BJT amplifier and RC coupled amplifier	1
21.	Effect of bypass and coupling capacitors on the low frequency response of the amplifier	1
22.	Transistorized Differential amplifier	1
23.	Class A and small signal analysis	1
24.	Class B and small signal analysis	1
25.	Class C and small signal analysis	1
26.	class AB push pull amplifier, collector efficiency of each, cross over distortion	2
	TOTAL	37

(Iyyakutti Iyappan.G)

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