ELECTRONICS

+2 2nd Year THEORY

Unit -1 Periods -10
(a) Amplifiers:- -RC coupled transistor amplifiers, voltage gain, frequency
Response Curve, Band Width, Gain Band Width product, Advantages and use : power
Amplifiers-, working principle,
(b) Feedback amplifiers:- Feedback technique, gain, negative feedback, voltage feedback
amplifiers, current feed back amplifiers, effect of negative feed back on input and output
impedance, voltage gain,
(c) Oscillators:- Condition for sustained oscillation, Bark-haussen criterion, tank circuit
with positive feedback,, Hartley oscillator, colpitt oscillator, , Crystal oscillator and its
frequency stability. (Qualitative analysis of all these oscillator).

Unit-II Periods -10
(a) Modulation and transmitters:- Type of modulation, amplitude modulation, side
band, power dissipation in side band, modulation index and its significance, AM
transmitter(explanation in block diagram),
Frequency modulation : super heterodyne receiver (explanation in block diagram),FM
demodulation FM detection, block diagram of FM receiver and explanation of each
stage,

Unit-III Periods -8
(a) Digital Electronics:- Decimal and binary numbers, conversion, binary arithmetic,
Boolean algebra, De Morgan's theorems.
Logic gates - OR,AND, NOT,NAND,NOR,XOR, circuit symbol, use, truth table only
(No electronics circuit for NAND, NOR & XOR)
(b)Antenna :- Principle and basic idea, types of antenna, dipole antenna,
Marconi Yagi antenna, use in transmission,

Unit-IV Periods -8
(a) Propagation of Radio Waves:- Modes of propagation of radio waves: ground
waves,
sky waves, space waves, skip distance, maximum usable frequency, general idea
about satellite communication,
(b) TV :- Principle of TV transmission, , TV transmitter
and receiver (explanation in block diagram).

Unit-V Periods -8
(a) Power Electronics :- Idea about JFET,SCR, , UJT, their working,
characteristics and uses.
(b) RADAR and CRO:- Basic principle of Radar, Block diagram of Radar, its function
and
use
Cathode Ray Oscilloscope, Basic idea and use with working.

--- ALL THE BEST ---