

SARASWATI MAHILA MAHAVIDHYALAYA, PALWAL

LESSON-PLAN

Class: 1st year(c.s.)

Semester:

ODD/EVEN

Subject: Electromagnetic induction and electronic devices

Session: 2021-22

Lecture Number	Topic
1	Introduction of Electromagnetic induction, Faraday law, Lenz 's law
2	Self Inductance, example and application, mutual induction, transient currents
3	Numericals, Growth and decay of current in a circuit : capacitance and resistance
4	Resistance and Inductance derivation, capacitance and Inductance derivation, numericals
5	Capacitance, resistance and Inductance derivation, numericals
6	Ac circuit analysis using complex variables with capacitance and resistance derivation
7	Resistance and Inductance, capacitance and Inductance derivation and numericals
8	Capacitance, Inductance and resistance series and parallel resonant circuit, quality factor, numericals
9	Revision and test of unit 1
10	Introduction of Semiconductor diodes, energy bands in solids, intrinsic and extrinsic semiconductor
11	Hall effect, PN junction diode And their V-I characteristics, zener diode
12	Avalanche breakdown, resistance of a diode, LED, numericals
13	Photoconduction in semiconductors, photodiode, solar cell
14	P-N junction half wave and Full wave rectifier, numericals
15	Types of filter circuits, zener diode as a voltage regulator, simple regulated power supply
16	Junction transistors, bipolar transistors, working of NPN and PNP transistors

17	Transistors connections (C-B,C-E,C-C),constants of transistors, transistor characteristics curve
18	Advantages of C-B configuration,CRO(principle, construction and working),revision
19	Numericals and test of unit 2
20	Introduction of transistor amplifiers, transistor biasing,methods of transistor biasing
21	Stabilization in transistor biasing,dc load line derivation
22	Common base and common emitter transistor biasing derivation
23	Common base, common emitter amplifiers, resistance capacitance (R-C) coupled amplifier
24	Two stage amplifier,concept of bandwidth numericals
25	Feed back in amplifiers, advantage of negative feedback emitter follower
26	Introduction of oscillators, principle of oscillation, classification of oscillators
27	Condition of self sustained oscillation,Barkhausen criterion for oscillation
28	Tuned collector common emitter oscillator,Hartley oscillator,colpitt's oscillator
29	Revision and test of unit 3

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