

SIM. S. D. GOVT. COLLEGE, NANGAL CHAUDHARY  
(M/GARH)  
LESSON PLAN FOR SESSIONS : 2022-23

NAME :- DR. HEMANT KUMAR SHARMA (Even Semester)  
CLASS :- B.Sc. 1st year (2nd Semester)  
SUBJECT :- PHYSICS (PAPER-II)

Feb - 2023

⇒ WEEK-1st [01 Feb to 04 Feb] (Unit-I)

- \* Electromagnetic induction :- Growth and decay of current in a circuit with (a) C & R (b) R & L (c) C & L (d) C, R & L.

⇒ WEEK-2nd [06 Feb to 11 Feb]

- \* AC circuit analysis using complex variables with (a) C & R (b) R & L (c) C & L (d) C, L & R.

⇒ WEEK-3rd [13 Feb to 18 Feb]

- \* Series and Parallel Resonant Circuit.
- \* Quality factor (sharpness of resonance).

⇒ WEEK-4th [20 Feb to 25 Feb] (Unit-II)

- \* Semiconductor diodes :- Energy bands in solids.
- \* Intrinsic and Extrinsic Semiconductor.
- \* Hall effect.
- \* P-N junction diode

⇒ WEEK-5th [27 Feb & 28 Feb]

- \* V-I characteristics of P-N junction diode.

⇒ March - 2023

⇒ WEEK-1st [01 March to 04 March]

[P.T.O.]

- \* March - 2023 [Week - 1st]
- \* Zener diode and avalanche breakdown.
  - \* Resistance of a diode.
  - \* Light emitting diode (LED).

⇒ Week - 2nd [06 March to 11 March]

\* HOLI VACATION \*

⇒ Week - 3rd [13 March to 18 March]

- \* Photo Conduction in Semiconductors.
- \* Photodiode.
- \* Solar Cell.
- \* Diode Rectifiers: - PN Junction half wave and full wave Rectifier.

⇒ Week - 4th [20 March to 25 March]

- \* Types of filter Circuits.
- \* Zener diode as voltage regulator.
- \* Simple regulated power supply.

\* Week - 5th [27 March to 31 March]

- \* Transistor: - Junction transistors.
- \* Bipolar transistor.
- \* Working of NPN and PNP transistors.
- \* Transistor Connections.
- \* Constant of transistor.

⇒ April - 2023 [UNIT - III]

⇒ Week - I [01 April to 08 April]

- \* Transistor Amplifiers - Transistor biasing.
- \* Method of transistor biasing.
- \* Common-base and Common emitter transistor biasing.

[P.T.O.]

⇒ April-2023 [Unit III] Week-2nd [10<sup>th</sup> April to 15<sup>th</sup> April]

- \* Common base, Common emitter amplifiers.
- \* Classification of amplifiers.
- \* Resistance-Capacitance (R-C) Coupled amplifiers.

⇒ Week-3rd [17 April to 22 April]

- \* Feed-back in amplifiers.
- \* Advantages of negative feedback emitter follower.
- \* Oscillators:- Oscillators, Principle of oscillation.
- \* Classification of oscillators.

⇒ Week-4th [24 April to 30 April]

- \* Condition for self sustained oscillation.
- \* Barkhausen Criterion for oscillations.
- \* Tuned Collector Common emitter oscillator.

⇒ May-2023 [Week-1]

⇒ [From 01 May to 06 May]

- \* Hartley oscillator.
- \* Colpitt's oscillator.

⇒ Week-2nd [08 May to 13 May]

\* Revision & Class Test \*