SRI Y N COLLEGE (AUTONOMOUS) NARSAPUR

DEPARTMENT OF PHYSICS

2016-2017

ADDITIONAL INPUTS

SRI Y N COLLEGE (AUTONOMOUS) NARSAPUR
DEPARTMENT OF PHYSICS
For 2016-2019 Batch
ADDITIONAL INPUTS

SEMESTER – 1 PAPER – 1 – MECHANICS

- Greens theorem.
- Gravitational potential and gravitational field

SEMESTER –2 PAPER -2 – WAVES AND OSCILLATIONS

- Sharpness of resonance.
- Transverse vibrations in a bar –wave equation and its general solution. Boundary conditions. free-free bar
- Velocity of ultrasonic in liquids by sear's method

SEMESTER – 3 PAPER – III – WAVE OPTICS

- Calculation of longitudinal chromatic aberration of a thin lens
- Astigmatism -- Curvature of field – distortion.
- Non reflecting films
- Semi conductor laser -- Laser characteristics

SEMESTER – 4 PAPER – IV – THERMO DYNAMICS & RADIATION PHYSICS

- Thermodynamic scale of temperature
- Characteristics of Ideal refrigerant
- Principle of refrigeration
- Vapour compression type refrigerator.

SRI Y.N.COLLEGE (AUTONOMOUS)-NARSAPUR
(Affiliated to Adikavi Nannaya University)
Thrice Accredited by NAAC at 'A' Grade
Recognized by UGC as 'College with Potential for Excellence'
For 2016-2017 Batch

III B.Sc.: PHYSICS SEMESTER – V PAPER – V
ELECTRICITY, MAGNETISM AND ELECTRONICS
ADDITIONAL INPUTS

- Electric Flux
- Polar and non-polar dielectrics in an electric field
- Magnetic Shell,
- Qualitative treatment,
- Magnetic properties of dia, para and Ferro magnetic materials
- Langevins theory of para magnetism
- Weiss theory of Ferro magnetism
- Energy losses and efficiency.
- Construction of single phase ac motor,
- Construction of single phase dc motor.
- Band theory of solids (qualitative) – Intrinsic and extrinsic semi conductors.

III B.Sc.: PHYSICS SEMESTER – V PAPER – VI
MODERN PHYSICS
ADDITIONAL INPUTS

- Bohr's atomic theory,
- Spectra of Hydrogen,
- Photoelectric effect-Einstein photoelectric equation.
- Stability of atom.
- Limitations of old quantum theory.
- Particle in a box
- Application of Schrodinger wave equation to particle in three dimensional boxes.
- Nuclear reaction,
- kinematics
- Calculation of Born coefficient and repulsive exponent. Born – Haber cycle.
- Persistent current, isotopic effect.
- Semi conductor nano particles
- carbon nano clusters