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JANGIPUR COLLEGE

(Govt. Sponsored)

(NAAC Accredited Cycle-2, B++)

P.O.-Jangipur, Dist.-Murshidabad, Pin-742213

U.G Sem-III Physics Project 2023

To be submitted on 16/02/2024 from 11.00 to 2.00p.m

Venue: Department of physics.

Topics of Honours students: (Any one from each paper)

HCC-V	HCC-VI	HCC-VII
<ol style="list-style-type: none">1. Fourier series expansion including complex representation.2. Solution of Laplace's equation in 3D spherical polar co-ordinates.3. Solution of 2D wave equation in Cartesian co-ordinates.4. Series solution around singular and ordinary point of differential equn.	<ol style="list-style-type: none">1. Potential in Thermodynamics.2. Einstein's theory of Brownian motion.3. J-T effect for Real and Vander Waal gases.4. Cooling due to adiabatic demagnetization.	<ol style="list-style-type: none">1. LEDs, Photo diode, Solar cell2. Transistor biasing and stabilization circuit.3. Properties of ideal/ practical Op. amp and its application.4. Effects of negative feedback on input/output impedance, Stability and distortion.

Topics for G.E Students: (Any one)

- a) Kepler's law, Satellite in circular orbit and applications. Basic idea of GPS.
- b) Hooke's law- Stress-strain diagram and relation between elastic constants.
- c) Postulate of special theory of relativity, length contraction, time dilation.
- d) Conservation of momentum, conservation of energy. Motion of rockets.

Alaka 8/2/24
Department of Physics
Jangipur College
Murshidabad.