CHANDIGARH ENGINEERING COLLEGE CGC, LANDRAN, MOHALI
Buiding Careers. Transforming lives.

Chandigarh Engineering College-CGC

Landran, Mohali, Punjab

Assignment No.1 **Max Marks: 10**

Subject: Engineering Physics (BTPH101-23) **Semester: 1st**

Date on which assignment given: **Date of submission of assignment:**

Course Outcomes

CO1: Relate the origin of bands inside the solids with the help of crystallography.

CO2: Discuss the working, properties and characterization techniques of semiconductor materials and devices.

CO3: Explain the properties of Magnetic materials and Nanomaterials along with its synthesis.

CO4: Develop the knowledge about the Maxwell equation and Electromagnetic spectrum.

CO5: Appraise the need for quantum mechanics, wave particle duality, uncertainty principle etc. and their applications.

CO6: Examine the laser system, optical fibre in industries, laboratories and in communication.

Bloom's Taxonomy Levels

L1 – Remembering, L2 – Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 – Creating

Assignment related to COs		Marks	Relevance to CO No.	Bloom's Taxonomy Levels
Q1.	Why X-rays are preferred for crystal structure determination? Derive an expression for Bragg's Law used in crystallography?	**2.5 marks**	**CO-1**	**L1**
Q2.	Describe the principle, working of LED and Zener diode. Give their merits too.	**2.5 marks**	**CO-2**	**L6**
Q3.	What do you mean by dielectric and dielectric polarization? Deduce D,P and E and establish the relationship between them .	**2.5 marks**	**CO-4**	**L3**
Q4.	Establish time dependent Schrödinger wave equation and further deduce time independent form of this equation.	**2.5 marks**	**CO-5**	**L5**