



**LSSBM's**  
**PADM. DR. V.B.KOLTE COLLEGE OF ENGINEERING, MALKAPUR**  
**Department of Applied Sciences & Humanities**  
**Academic Session 2025-26 (Winter-2025)**  
**CLASS TEST – I**  
**Subject: - Engineering Physics (1AS101BS)**

**Class: First Year**

**Semester: I**

**Time: 1.00 Hr.**

**Total Marks: 20**

**Guidelines:-**

1. Read all questions carefully.
2. Each question has marks.
3. Solve Q.1, Q.2, Q.3 and Q.4.

<b>Q. No.</b>	<b>Question</b>	<b>Marks</b>	<b>CO</b>	<b>BTL</b>
<b>1.A</b>	Differentiate between conductors, insulators, and semiconductors based on their energy band structure.	5	1	Analyze
<b>1.B</b>	Compare the electrical properties of intrinsic and extrinsic semiconductors.	5	1	Analyze
<b>OR</b>				
<b>2.A</b>	Define intrinsic and extrinsic semiconductors with suitable diagrams and examples.	5	1	Remember
<b>2.B</b>	Define Hall effect. Derive the expression for Hall voltage.	5	1	Evaluate
<b>3.A</b>	State De-Broglie's hypothesis. Derive an expression for De-Broglie wavelength.	5	2	Apply
<b>3.B</b>	State and derive Heisenberg's Uncertainty Principle.	5	2	Apply
<b>OR</b>				
<b>4.A</b>	State and explain Planck's hypothesis.	5	2	Remember
<b>4.B</b>	Explain the Compton effect with neat diagram and derive Compton shift formula.	5	2	Analyze

**CO1:** Gain the knowledge about semiconducting materials and new engineering materials, semiconducting devices and its applications.

**CO2:** Co-relate the theoretical principles and fundamentals of modern aspects in Physics.

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**Subject Incharge**

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**Class Test Incharge**

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**QP Moderator**

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**HOD**