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LNCT UNIVERSITY, BHOPAL

Enrolment No.

CS-201

B. TECH (CS/AI ML) - I/II SEMESTER

EXAMINATION [DEC-2024]

ADVANCED PHYSICS & SUSTAINABLE ENVIRONMENT

Maximum Marks: 70

Time Allowed: 3Hours

Note:- Attempt all questions. Internal choices are given.

(SECTION -A)

1. Short Answer Type Questions (Attempt Any Five) [5x6=30]

- Explain the physical significance of divergence & curl.
- How Zener diode is used for voltage stabilization.
- Explain wave function and write down its properties.
- Write down the difference between Interference & diffraction.
- Discuss the reason and solution of nuclear accidents.
- What is nuclear holocaust.
- What do you understand by coherence length in laser.

(SECTION -B)

2. Long Answer Type Questions (Attempt Any Four)
[4x10=40]

- Discuss fermi level in intrinsic & extrinsic semiconductors.
- Deduce expression of energy for free particle in a box.
- Explain diffraction at single slit in detail with intensity distribution curve.
- Discuss about Energy environment & sustainability related issues.
- Discuss in detail about Global warming, its causes and safety measures.
- Explain construction, working & energy level diagram for He-Ne laser.

