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LNCT UNIVERSITY, BHOPAL

Enrolment No. . .

CS-201

B. TECH (CS/AIML) - I/II SEMESTER

EXAMINATION [DEC-2024]

ADVANCED PHYSICS & SUSTAINABLE ENVIRONMENT

Maximum Marks: 70

Time Allowed: 3 Hours

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

(SECTION -A)

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

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

(SECTION -B)

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

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



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