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B-TECH ECE 2nd semester (Backlog 2017 Batch)

APPLIED PHYSICS - II **PAPER CODE-202**

Time Allowed: 3 hrs **Max. Marks-70**

Section-A

INSTRUCTION - All questions are compulsory. Each question carries 6 marks.

5x6=30

Q 1- What are semiconductors? Write short note on N-type and P-type semiconductors with examples.

Q2- What does Equation of continuity tell? Derive it.

Q3- Write on Characteristics of Wave function of the particle.

Q4- Derive the time dependent Schrodinger equation.

Q5- What is Meissen Effect? Write short note on Type-I and Type-II super conductors.

Section-B

INSTRUCTION - There are six questions in this section. Candidates are required to attempt **any 4 questions out of 6 questions**. Each question carries equal marks

4x10=40

Q6- What is Poynting vector? Deduce energy density associated with E & H.

Q7- Deduce wave function and energy of a particle trapped in one –dimensional box.

Q8- Define forward and reverse bias PN-Junction Diode.

Q9- What do you mean by Ampere's Inconsistency? How did Maxwell Modify it?

Q10- What is Bragg's Law? Writes the method of production of X-rays and its properties.

Q11- What do you mean by Ultrasonics? Explain the production of Ultrasonics Using Piezoelectric Effect