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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

M.Tech (Int.)

FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)

(Subjective Type)

Subject Code: AMIAS0201A

Max. Mks. : 30

Subject: Engineering Physics

Time : 50 Minutes

General Instructions:

All questions are compulsory.

Question No. 1 to 15 are subjective type question carrying 3 marks each. Attempt any 10 out of 15 questions.

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty
1	Is earth an inertial or non – inertial frame of reference? Explain		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
2	Write down the postulates of special theory of relativity.		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
3	What is GPS?		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
4	State Heisenberg uncertainty principle for position & momentum.		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
5	Define group velocity and phase velocity.		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
6	Find the energy of an electron moving in one dimension in an infinitely high potential box of width 1A0 .		Attempt any 10 questions	10 x 3=30	3		Subjective	Genius
7	What are optical filters? 		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
8	What are the conditions of sustained interference?		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty
9	What are missing orders in a double slit diffraction pattern?		Attempt any 10 questions	10 x 3=30	3		Subjective	Brilliant
10	Derive an expression for conductivity of a semiconductor.		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
11	What is Fermi level?		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
12	Write the applications of solar cell.		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
13	What is the full form of LASER? Explain the basic principle of Laser.		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
14	What is Attenuation?		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart
15	What is the Basic principle of optical fiber? Give some applications of optical fiber.		Attempt any 10 questions	10 x 3=30	3		Subjective	Smart