Seat No.:	Enrolment No
Seat 110	Em onnent No

GUJARAT TECHNOLOGICAL UNIVERSITY

BE (SPFU) - SEMESTER-I-II (SPFU) - EXAMINATION - SUMMER 2017 Subject Code: BSP001 Date: 30/05/2017

Subject Name:	ENGINEERING	PHYSICS
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Time:02:30 PM to 05:30 PM Total Marks: 70

Instructions:

1. Attempt any five questions.

- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1 (a) Differentiate between type-I and type-II superconductors.	07
(b) Explain Nd:YAG laser with energy level diagram.	07
Q.2 (a) Determine the velocity of ultrasonic sound in a given medium using acoust grating pattern.07	ic
(b) What is SONAR? How SONAR works for finding the depth of a sea.	07
Q.3 (a) Write a short note on Carbon Nano Tube (CNT).	07
(b) What is hysteresis curve in case of Ferromagnetic material?	07
Q.4 (a) Explain Shape memory alloys in detail.	07
(b) What are the basic components of LASER? Explain with the optical resonation cavity.	otor 07
Q.5 (a) Write down properties of LASER.	07
(b) Explain the different types of polarizations in dielectric material.	07
Q.6 (a) Draw and explain a diagram of step index and graded index optical fiber.	07
(b) Explain energy materials in terms of cell.	07
Q.7 (a) What is Reverberation time? Explain Sabine's formula for the same.	07
(b) Write down the applications of superconductors.	07