

St. Peter's Engineering College (Autonomous) Dullapally (P), Medchal, Hyderabad – 500100. II - Mid Term Examination – JUNE 2024						Dept.	:	S&H
						Academic Year 2023-24		
Subject Code	:	AS22-00BS11	Subject	:	Applied Physics			
Class/Section	:	B. Tech. (A)	Year	:	I	Semester	:	II
Duration	:	120 Min	Max. Marks	:	30	Date:	:	

BLOOMS LEVEL					
Remember	L1	Understand	L2	Apply	L3
Analyze	L4	Evaluate	L5	Create	L6

PART – A (10x1M = 10M)**Note: Answer all Questions. Each Question carries equal marks.**

Q. No	Question (s)	Marks	BL	CO
UNIT - IV				
1	a) What is nanoscale?	1M	L1	C122.4
	b) What is surface to volume ratio?	1M	L2	C122.4
	c) What are the applications of nanomaterials?	1M	L1	C122.4
	d) Mention the examples of one- dimensional Nano particles.	1M	L2	C122.4
	UNIT – V			
	e) Write the characteristics of LASER beam.	1M	L1	C122.5
	f) Explain the stimulated emission.	1M	L2	C122.5
	g) What are the main components of an optical fiber?	1M	L1	C122.5
	h) What do you mean by the numerical aperture for an optical fiber?	1M	L2	C122.5
	UNIT – III			
	i) What is the magnetoresistance?	1M	L2	C122.3
	j) Define Type-II superconductor.	1M	L2	C122.3

PART – B (20M)

Q. No	Question (s)	Marks	BL	CO
UNIT - IV				
2	a) Differentiate between physical vapor and chemical vapor deposition technique of nanofilm synthesis.	4M	L2	C122.4
	b) Describe sol-gel method used for nanoparticle synthesis.	4M	L3	C122.4
OR				

3	a) Discuss briefly about the TEM technique for characterizing the nano materials.	8M	L3	C122.4
UNIT – V				
4	a) What are Einstein's coefficients? Find the relation between them?	4M	L2	C122.5
	b) Discuss the two applications of Optical fibers.	4M	L2	C122.5
OR				
5	a) Explain the construction and working of Nd-YAG Laser.	8M	L3	C122.5
UNIT – III				
6	a) Explain ferromagnetism. What is hysteresis?	4M	L3	C122.3
OR				
7	a) Distinguish the Type I and Type II Super Conductors.	4M	L3	C122.3
