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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE					
Mid Semester Examination – October 2019					
Course: B. Tech in Civil/Mechanical			Sem.: I		
Subject Name: Engineering Physics			Subject Code: PHY1202		
Max Marks: 20		e: 04/10/2019	Duration:-1 Hr.		
 Instructions to the Students: 1. Illustrate your answers with neat sketches, diagrams etc. wherever necessary. 2. Use of non-programmable calculator is allowed. 3. If some part or parameter is noticed to be missing, you may appropriately assume it. 					
				(Level/CO)	Marks
Q. 1	Attempt following Questions				6
	1. If the damping is smaller then the resonan	ce will be,		CO-1	
	a) flatter b) sharper c) none of these d) b	oth a and b			
2. Length of Nickel rod needed to produced ultrasonic wave of frequency 40 CO-1 KHz is, (Given: Density = 9.99 Kg/m ³ , Y= 8 X 1010 N/m ²).					
	a) 1.2 cm	b) 1.58 m			
	c) 1.1 m	d) 1.4 cm			
	3. Depth of sea calculated by using formula,	V X C		CO-1	
	a) $D = \frac{VAT}{2}$	b) $D = \frac{V X C}{2}$			
	c) $D = \frac{V X t}{F}$	d) $D = \frac{V X F}{3}$			
	4. In doubly refracting crystal along optical a	axis		CO-1	
	a) $\mu_0 > \mu_e$ b) $\mu_0 = \mu_e$ c) $\mu_0 < \mu_e$ d) $\mu_0 = \mu_e$	e ²			
	5. The active material in He-Ne laser is,			CO-1	
	a) Ne b) He c) Cr d) All of these			60.4	
	6. The diameter of the n th dark Newton's rin a) $Dr^2 = (2r+1) P$ (b) $Dr^2 = (2r+1) P$ (c)	g is given by formul $Dn^2 = 2n Dn^2$	la, 2 – 4 – D)	CO-1	
	a) $Dn^2 = (2n+1)AR$ b) $Dn^2 = (3n+1)AR$ c)	$DH^2 = 2HAK (a) DH^2$	- = 411KA		
0.2	Solve Any Two of the following.				3 X 2
(A)	State Piezoelectric, Inverse Piezoelectric and	Magnetostriction e	ffect.	CO-1	
(B)	Explain spontaneous and stimulated emission	n of radiation.		CO-1	
(C)	Describe the structure of optical fiber.			CO-1	
Q. 3	Solve Any One of the following.				8
(A)	Explain Piezo electric effect for the production	on of ultrasonic way	ve.	CO-1	
(B)	Explain Ruby laser with neat labeled diagram	m.		CO-1	
	*** En	nd ***	IBRARY	chnology	

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