	Enrollm	ent No:		<u></u>		
		C.U.SHA	H UNIVERSITY			
	Summer Examination-2017					
	Subject 1	Name: Physics-II				
	Subject	Code: 4SC02PHC1	Branch: B.Sc. (All)			
	Semester	r: 2 Date: 06/05/2017	Time: 02:00 To 05:00 Marks: 70			
	(2) I (3) I	Use of Programmable calculato	· · · · · · · · · · · · · · · · · · ·			
Q-1		Attempt the following quest	ions:	(14)		
	a)	Define Doppler effect				
	g Half Life Time ' ' and Decay Constant 'λ' for a					
	c)	radioactive element. What is the difference between	en Isotones and Isotones?			
	d)	Draw and define: Unit cell.	in isotopes and isotones.			
	e)	Define Musical sound				
	f)	Write Bragg's formula for X-	· ·			
	g)		sound? Give its value with unit.			
	h) i)	Give examples for crystalline Abbreviate LED and draw its				
	j)	Define: Ripple Factor - γ.	symbol			
	k)	Draw symbolically P-N-P and	d N-P-N transistors			
	1)	Define Bravais lattice.				
		Define Anisotropy.				
A tto	n) mnt any f	State the working principle of	-			
Aue	mpt any i	four questions from Q-2 to Q	-o			
Q-2		Attempt all questions		(14)		
	a.	_	different from Transversal waves? Give examples.	06		
	b.	List the properties of X-rays.		08		
Q-3		Attempt all questions		(14)		
	a.	Compare the properties of \propto ,		07		
0.4	b.		s using a Coolidge Tube with necessary diagrams.	07		
Q-4		Attempt all questions		(14)		



b. Calculate sound velocity in water if its bulk modulus is 2.23x10⁹ Pa.

c. Derive Newton's formula for velocity of sound in air applying Laplace's

a. State and explain the Laws of Radioactivity

Correction to it.

05

04

05

Q-5		Attempt all questions	
	a.	Discuss Full wave Center Tap rectifier in detail.	07
	b.	Write a short note on Zener Diode.	07
Q-6		Attempt all questions	
	a.	Explain how do multi-colour LEDs work?	06
	b.	What is Bravais Lattice? Describe 14 Bravais lattices of 7 crystal systems with lattice parameters and diagrams.	08
Q-7		Attempt all questions	(14)
	a.	Explain the working of a P-N-P transistor.	07
	b.	Describe Common Base Transistor configuration with circuit diagram. Explain it's I/P & O/P characteristic curves.	07
Q-8		Attempt all questions	(14)
	a.	1	07
	_	Crystal plane with necessary diagram.	
	b.	Give mathematical analysis of a Full Wave Rectifier.	07

