## C.U.SHAH UNIVERSITY Summer Examination-2018

## Subject Name: Physics-II

	Subject	Code: 4SC02PHC1	Branch: B.Sc. (All)	
	Semester	r: 2 Date: 27/04/2018	Time: 10:30 To 01:30	Marks: 70
	Instructio (1) U (2) I (3) I (4) A	ons: Use of Programmable calculator Instructions written on main answ Draw neat diagrams and figures Assume suitable data if needed.	& any other electronic instrument is prohibitiver book are strictly to be obeyed. (if necessary) at right places.	ted.
Q-1		Attempt the following question	ions:	(14)
Atte	a) b) c) d) e) f) g) h) i) j) k) l) m) mpt any f	Define the term Anisotropy. Draw symbolically P-N-P and Give examples for Isotopes and Abbreviate LED and draw its se Define Musical sound. Write Bragg's formula for X-ra What is threshold intensity of se Give one point of difference be Define Unit cell. What are X-rays? Give an expression connecting radioactive element. Define Bravais lattice. Define Doppler effect. State the working principle of four questions from Q-2 to Q-8	N-P-N transistors. Ind Isotones. symbol. ray diffraction sound? wetween crystalline and non-crystalline solids g Half Life Time ' $\tau$ ' and Decay Constant ' $\lambda$ ' f a photodiode. <b>8</b>	for a
Q-2	a. b.	Attempt all questions Differentiate between Longitud Discuss the properties of X-ray	idinal waves and Transversal waves? .ys.	(14) 06 08
Q-3	a. b.	Attempt all questions Explain how multi-colour LEE What is Bravais Lattice? Descr lattice parameters and diagram	Ds works? cribe 14 Bravais lattices of 7 crystal systems v ns.	(14) 06 with 08
Q-4	a. b.	Attempt all questions State and explain the Laws of I Derive Newton's formula for v Correction to it.	Radioactivity velocity of sound in air applying Laplace's	(14) 06 08



Q-5		Attempt all questions	(14)
	a.	Write a short note on Zener Diode.	07
	b.	Give mathematical analysis of a Full Wave Rectifier.	07
Q-6		Attempt all questions	
-	a.	Compare the properties of $\propto$ , $\beta$ and $\gamma$ radiations.	07
	b.	Describe production of X-rays using a Coolidge Tube with necessary diagrams.	07
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.	07
		Explain it's I/P & O/P characteristic curves.	
Q-8		Attempt all questions	(14)
	a.	Discuss Full wave Center Tap rectifier in detail.	07
	b.	What are Miller Indices? Illustrate the steps to find out Miller indices of a	07
		Crystal plane with necessary diagram.	

