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G.T.N. ARTS COLLEGE (AUTONOMOUS)
(Affiliated to Madurai Kamaraj University || Accredited with 'B' Grade by NAAC)
END SEMESTER EXAMINATION - NOVEMBER - 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme : M.Sc. Physics

Course Code : 20PPHC31

Course Title : Solid State Physics - I

Date : 03.02.2022

Time : 10:00 AM - 1:00 PM

Max. Marks : 60

Q. No.	SECTION - A (10 * 1 = 10 Marks) Answer ALL Questions	CO(s)	K - Level
1.	How many atoms per unit cell are in hcp structure? 1.1 3.4	CO1	K2
2.	The atomic packing factor of BCC structure is _____. 1.0.54 3.0.74	CO1	K1
3.	Phonons mean free path is _____ to absolute temperature. 1.directly proportional 3.linearly proportional	CO2	K2
4.	If the mean free path of charge carriers is high then K is _____. 1.low 3.independent	CO2	K2
5.	A crystal can be an insulator only if the number of valence electrons in a primitive cell of the crystal is an _____ integer. 1.odd 3.odd or even	CO4	K2
6.	The magnitude of the energy gap for an insulator is _____. 1.less than 1 eV 3.more than 3 eV	CO4	K1
7.	The lower the carrier concentration, _____ is the magnitude of the Hall coefficient. 1.smaller 3.very less	CO3	K2
8.	Electrons in Fermi level will follow _____. 1.Bose Einstein energy distribution 3.Fermi Dirac energy distribution	CO3	K1

