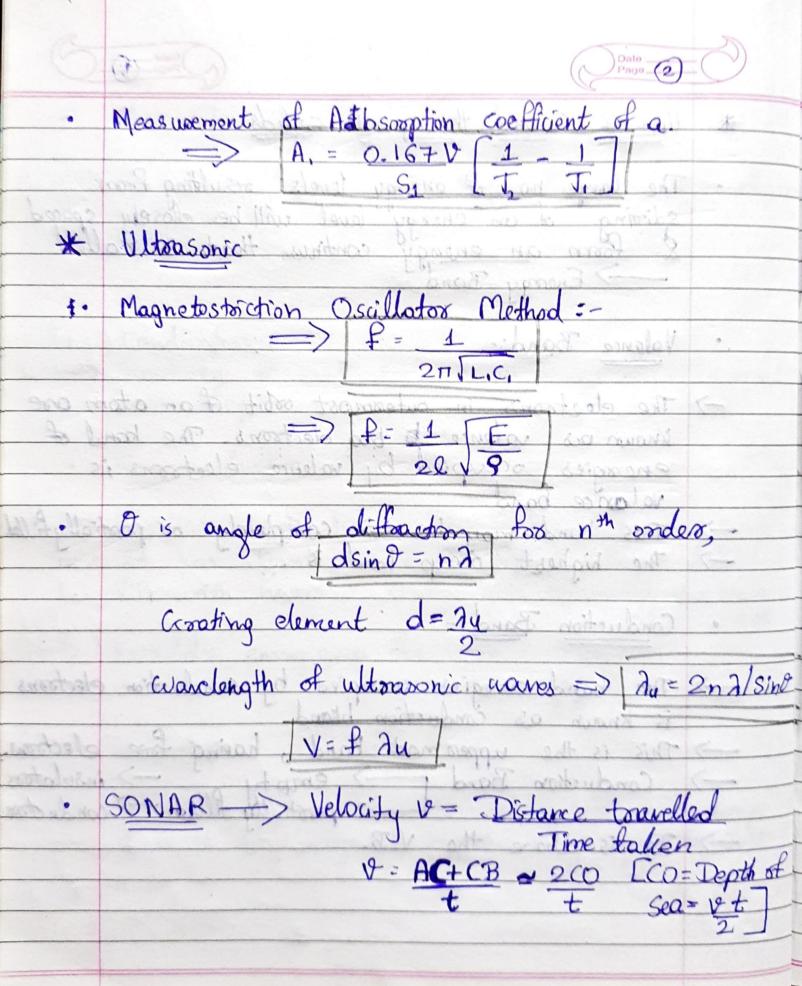
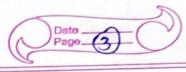
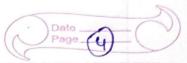


*	Formulas:
3+	Vnit-1
	Loundness & Intensity are related by [L=Klog+o] = (Weber-Frenchier Law)
The state of the s	
12.0	Intensity -> I = a watt . Threshold Intensity At m² -> 10-12 W/m²
	$\longrightarrow \boxed{I = 2\pi f^2 a^2 \rho v}$
	Intensity level Relative Intensity
	$T_{L} = k \log_{10} \left(\frac{1}{I_{D}}\right) \text{ bel}$ $T_{L} = 10 \log_{10} \left(\frac{1}{I_{D}}\right) \text{ dB}$ $T_{L} = 10 \log_{10} \left(\frac{1}{I_{D}}\right) \text{ dB}$
	[1] · 10 wgio C 1203 charles
C.	Absorption of coefficient a = Sound energy absorbed Total Sound energy Unit of absorption -> Sabine 10.W.V incident on it
•	Unit of absorption -> Sabine 10.W.V in cideration is
•	Satinés Formula -> E = Fm at t = T
•	Reverberation Time (T) & Volume of hall V
(=0.16	7: T= KV Or T= 0.1672
	A Eas





¥	11 it 2 R. I thank of calida
	Unit-2 Band theory of Golids
	The large no. of energy levels resulting from spiriting of an energy level will be closely spaced & from an energy continum that is talled —> Energy Band.
	a little of a change had will be closely spaced
	Satting of an energy west with that is talled
	2 form an energy continum has
	trongy pand.
	W. Division of the state of the
•	Valence Band:
	a 11 day atom me
->	The electrons in outermost orbit of an atom one
	known as valence & boo electrons. The hand of
	known as valence to to dectoons. The band of energies occupied by valence electrons is
	valance band.
->	This band may be -> completely or partially filled. The highest occup band is
-7	The highest occup band is
	Conduction Band:
	The band energies occupied by conduction electrons is known as conduction brand.
	Known 08 conduction beand.
->	This is the upper most band, having free electrons.
	Conductors Band -> empty -> insulators
	This is the uppers most band, having free electrons. Conduction Band > empty -> insulators > parotrally filled -> conductors
000	It is above the V.B.
11	17 15 ODOVE THE
100 Car 1 .	
中心=	



3/4	Page (y)
	Fosbidden energy gap:
and)	The gap between VB & CB on enougy level diagrams
→	The gap between VB & CB on energy level dagson is known as. Electrons are never found in this gap.
bed - (215)	Conductors:- Resistivity of conductors lies in range of 1092 mat room temp.
	Semi-Conductors:
→ →	Resistivity => 10 1/2 no to 10 3 cm at ocom temp. It has almost an empty CB & almost filled VB with narrow we energy gap separating two bands = 1eV.
->	Foxbidden enong gap fox Gre => 0.7eV Si => 0.3eV 1.1
• (Insulators:
-) -)	Resistivity => 103 rm to 107 rm at room temp. E. G is very large 8 approximately equal to 5 eV.
lavel y	pous pring and module

Aug Park King



4	Page (5)
	Formi Distribution Function:
7	Crives the probability of occupancy of energy levels.
	f(E) = in 1 month of many 1 month of 1 to 1
IN NE	For filled energy level, F(E)=1 8 untilled level Special cases:-
	T=OK, FZEP - reduction - insol .
tea which the second	F(F)= 1 (E-EP is -ve) # 17e-00 1to 11 means all energy level below FF are occupied by electrons.
2	T=0 V = V
SIS .	means and EL above Ex are vacant 2 i.e. there is not change of electron occupying energy level above Ex.



-		
•	Koonig-Penny Model:-	
→ →	Fach well has width a 2 depth vo. Resord of potential is (atb).	
-> ->	In regions whose 0 Lx La, PE is to -b Lx LO, it is V=Vo.	be zero. (V=0)
•	Bloach Theorem:	
	224 ()	= 2mE -2
	Region II $\frac{\partial^2 B^2}{\partial x^2} = B^2 \sigma_{\text{II}}(x) = 0$ B^2	2m(Vo-E)
		(3)
	P'= mVoba _ Poee electoons =) p?	$- t^2k^2$
	P'= mVoba Proce electrons => p ² th ² 2m	2m
	x= k= p 6	2m _(5)
	h - 6	
	Width of EB increases -> value of E(a)	increases.
	Width of EB decreases = value of P Cut	ich depends
	on vo) increase	808
	7. (Caca	