			Date:			
	100		100811103			
	Lechue 2		and the second s			
	kinds of non invadue 1 maging:	A PART TALLY	a depuny noti			
_						
	a) Emwares (Imaging): We give energy bobody, it interacts and comes					
	out, with its properties changed					
	eg. Xray, electric Impedence tomography (3D), Utrasond Photographic CT scan, MRI, NIR, PET scan, OCT, Burnercence					
	CT scan, MRI, NIR, PET scan, OCT, glubrescence					
	b) We measure signals coming from the body.					
	eg. ECG, ESG, Emg, 2kg phonocaidiology, tempel					
raute	n bourous more up anomed horaxis as	\$5.02 h				
husd	Forward and Inverse problem in non Invasive testing					
	marin ella la majohin con allenia					
•	Forward model: A physical/math model explaining					
	(a) How a signal is originated a propagated in object					
	(b) Now probing wave interacts with object.					
	eg. Neuron achien potential generated and manifestias EEJ					
	The second secon	of X rays interact with human body (Beer lamberts law)				
aj•ta						
	Measurent Modies Measurent ob Signals (eg. using electrode sternoscope and other derectors.  Know what kind obproperties to measure non-investively					
•	Inverse model: Given the Borward model and measurements taken,					
	(body) find object properties.					
1	eg. Status ob heart using EEG					
F	eg. Absorption coels obtissue using CTscan.					
eq.	MRI waves interact with 120 molecule		Deduce			
,	dight waves scarrendondrebracted	dight	human body			
	Thermal radiation generated by body	mersity mes	property, like desect himoury			
	Shidy these and make math model	through body	analyse hissue			
	explaining these.	Million II was a suprier	and model egn.			
	FORWARD	M				
		,	INVERSE			

		Page No.:			
.,,,,,,,	USUAL METHOD FOR IMAGING	Date:	YOUVA		
0	Source				
More of the working the state of the state o					
	Probingray -> Radio/Millo IR/Visible/UV/ Xro	y/ Yray			
(O'DE) W	$\rightarrow 27$ , $\epsilon$ mergy $\tau$	danger T			
MOORILA	Sample Intensity obray imp.		±		
MODELLON PORTOR					
(aim)	Changed ray				
Meanur	Delector -> Delector sensitivity Imp., must . ma	atch wave l	ype.		
Local	Use image processinghere to decipher image.				
Inverse	Image >Toget 3D image from 2D, take 2D projections brown				
1000	dibberent views and superimpose  Type ob Imaging -> Specims graph	·			
Model	Property Tomography etc.				
	ere.				
	Process to detect desorming		<u> </u>		
•	We know Ideal measurement obbody parameter	١.			
	Now assume a deformity (eg humour) and = gu		neasuren Unthetic		
_			0		
•	Compare synthetic with a chied measurments.		وا	ron	
•	19 almost same, your guess is final. Else mak	a arons g	auss in Re	JUCE.	
•	Sort & like a negative feedback loop. (Seeduce es	YDY)			
•	In such a way, opinical mech properties of the book	sy are used	Sor dicy	gnoves	
	Examples of Identification of object properties using	g certain m	easureme	Als_	
•	Which duck swimming? Using swimming pattern.	27			
•	Which tood? Using smell.				
•	Where manhale by bytacle? Using echalocation mea	suemens.			
	there the echolocation process ( Ling sound wave replection etc) is (described)  for would model. Measuring replected sound is the measurement knowless.				
,	for usual model. Measuing replected sound is	ne measur	ement me	odel	
	and based on mar, finding obstacle is the lover	se model.	7   		
	Road crossing, driving, I dentifying songs, I dentify du				
	Basically any Situation where you experience		10.00.00		
•	3	•	uren un c	χ	
	lean fromit. (more examples inslides) and build	a mode.			