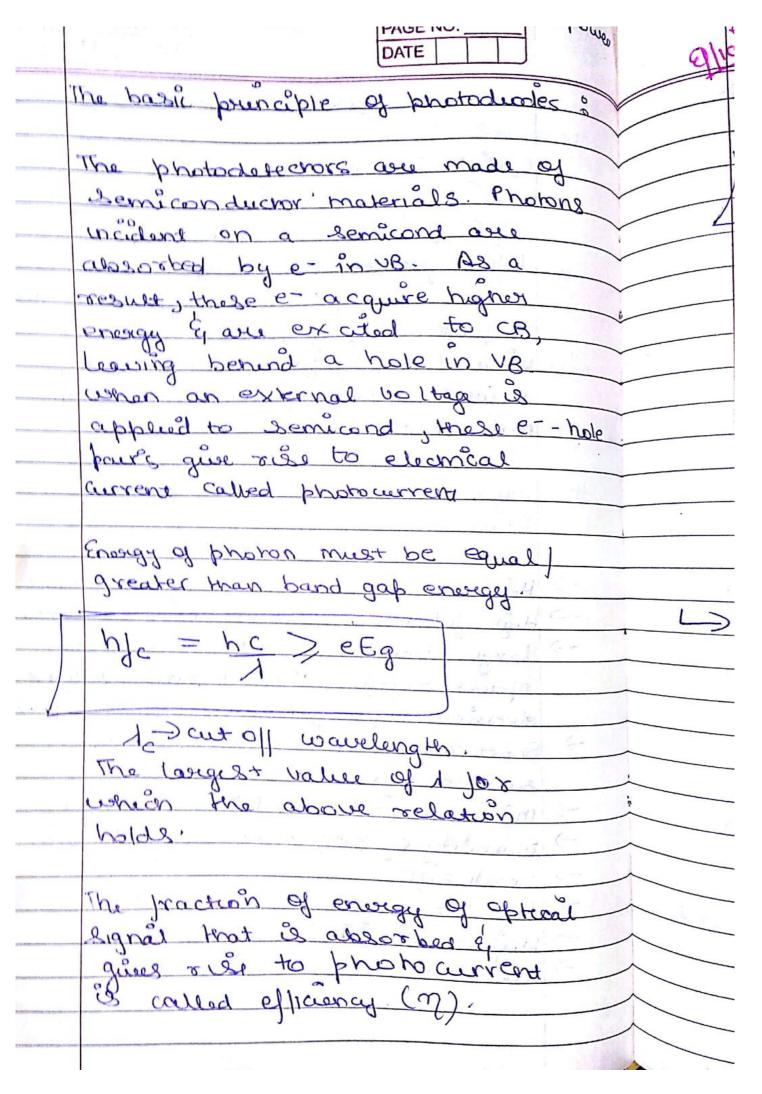
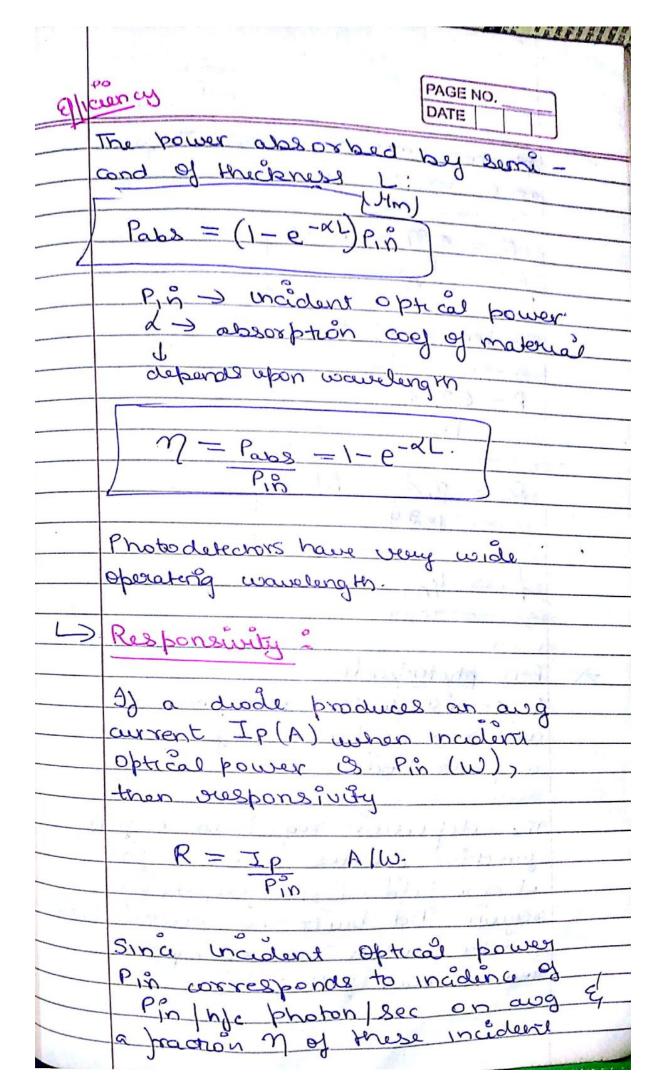
7	141	PAGE NO.
The sur		DATE 1/ 10 16
South & South		Optical Detectors
8 80		
		optical detectors are used to convert
		recieved optical signal into elachical
aus		signal, which is then amplified
		before further processing.
ves		of detectors performance allows.
2 Ctran		Improvement of faces stoppaders
ed	-	installation of Juver repeaters &
stur	-	dowers both capital investments &
and the same	nhair-	maintenance costs
	1	The transfer of the state of th
a (6	#	Performance and unpatability requirements
	-	The same of the sa
7	-	High sensituaty at operating wavelengths.
11		That responds to recurred
		1 strang product work
	7	secondal signal by queen obtical (18)
<u></u>		store response time to obtain a
	1	Suetable b.co.
	7	The hoise introduced by deleaning
	1	Della de performance characteristics
	7	1 2 2 6
	-	how bigg walter
	1	track to be the
de la		loco cost.
		the second of the second of the second of





	ON SEC. 9	PAGE NO
	photons are absort	bed & generate
	R=em Alw hyc	
	In terms of 1	
	R=em1 hc	
	R=n/ A/w	
	1 > Mm	- Harrigal
*	P-n photodiade	1
	A semi conductor p- with reverse bias ve a photodiade	toge forms
	The depletion region function creates a	on in a p-n
	region and built-	in Bleama held
1-	can be enhanced reverse bias Voltage	by applied
	entime was in the	Marie and the

	UAIE
	An this e - that are generated
	by absorption of photons within
	or close to depletion region
*	will be Swept 400 n-type
	n-type before they recombin with
	holes in b-type. This process
	en called about the give of the
100	à ales d'eift. E give ruse to a avoient in ext arout.
	a assert
	e-hole pairs that are generated
	l autous laces de la
	for away mon depletren region
	travel primarily under effect
	of diffusion & may recombine
	in ext arant This reduces
3. 3.	in ext arcut mes scauces
	The efficiency of of photodetector' Since deflusion is a much slower
1 4	Since adjusion as a ready space
	process than drift, the deflusion
	aurent that is generated by these
	e-hole pair will not respond
	quickly to changes in intensity
	of incident optical signal, thus
	reducing the freq response
	of photodeode
_	Charles and a separate to your
_	Comment of the second of the s
1	TO CO JE WASTER TO PROPERTY
_	3 - 2 - 2 1 1 - P. M. 55 - M. 5 - M.
_	The state of the s
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	The second secon	
£2.00	PAGE NO	
W.A.	DATE	
T	b-i-D bbot decales	
	p-1-D photo decdel	
	50	
,	To improve efficiency of	
	photodetector, a very ligh	H
	all bear in brain semi caral.	.)
	- Inmoduced blue b- & n-	1.
-	Such a duale 28 called bin ph	Type
	such a diade & valled pin ph	who dead
	where i in kin is for inkins	IC .
		_
	In these, the depletion regio	Ď.
	extends completely across H	NS
	inmosic semicondu dor Th	
	winder of p-type and n-type	
	Semiconductors & Small com	
	to inmincia region, so that	up aveg,
1 1	Of light absorption takes be	Much
		ice
	in this region This increases	20
	the efficiency & thus response	wity_
1	of proto deady.	
1)	The second secon	
	Fire day to the transfer of the state of the	1
×	Avalanche photodiodes	
	A) generated p-18 0	0 1
	here class subjected to	1010
	very your great ja	ari
	acquire sufficient energy to b	nock
	4) generated e- & subjected to very high electric field, it of acquire sufficient energy to be of more e- from VB to CB.	
	These secondary e- hole pa	und -
10	Can generate even jurther.	
		ones

	PAGE NODATE
-	e-hale pairs when they are
	accelerated to Sufficient levels
	This process is called avalanche
	which cation. Such dies de
	Called avalanche photodiode
	(APD).
İ	The state of the s
1	The no- of secondary e hole
1	pairs generated by avalanche
	multiplication process by singie
	e- is random. Et mean ralue.
	of this no. & termed theby
	multi bli carure gain & denoted 6m
	multi pi catare gows y construction
	700 00 00 00 00
	The multiplicative gain of APD
	can be made quite large value
	of 6. De also accompanied
	E even onfinite, a condition
	Called avalanche breakdown:
	The state of the second section is a second section of the second section in the second section is a second section of the second section is a second section of the second section section is a second section of the second section
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