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Internal Assessment Test II – April 2019

Sub:	FIBER OPTICS & NETWORKS	Sub Code:	15EC82 Branch: TCE			,		
Date:	16.04.2019 Duration: 90 min's Max Marks: 50	8th		OBE				
	Answer any FIVE FULL Questions	<u>3</u>		MA	ARKS	CO	RBT	
1.	Draw the cross section of GaAlAs double heterostru	cture light en	nitter energy	band [10]	CO3	L3	
	gap diagram and refractive index variation. Explain the	ne importance	· ·					
2.	Explain various splicing techniques used in optical fil	er communic	cation.	[10]	CO3	L5	
3. (a)	Explain intermodal dispersion.			[06]	CO2	L5	
(b)	With proper sketch explain RAPD photodiode.			[04]	CO3	L4	
4.	4. With a schematic of a Edge LED ,explain it design features.						L2	
5. A double hetero junction InGaAsP LED emitting at a peak wavelength of 1310nm has a radiative and nonradiative recombination times of 30 and 100 ns, respectively. The drive current is 40mA. Find out internal quantum efficiency & internal power.						CO3	L3	
6.	. Derive the expression for lasing condition and hence for optical gain in laser.						L4	
7.	a) List out the requirements that a good connector sho b)Types of LASER with schematic diagram of any tw		pes .	[:	5+5]	CO3	L4	

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6.	Derive the expression for las	sing cond	lition and hen	ce fo	r optical gai	in in laser.	[10]	CO3	L4
7.	a)List out the requirements t b)Types of LASER with sch	_				pes.	[.	5+5]	CO3	L4