



VIMAL JYOTHI ENGINEERING COLLEGE

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERALA

Affiliated to APJ Abdul Kalam Technological University, Approved by AICTE
ISO 9001 : 2015 Certified | Accredited by Institution of Engineers (India), NBA, NAAC
Ph: 0490 2212240, 2213399 Email: office@vjec.ac.in Website: www.vjec.ac.in

NAAC Cycle 2

Criterion: 2.6.1

2.6.1 Dissemination of COs, POs and PSOs .

Sl. No.	Contents
1	Geo-tagged photos for dissemination of COs, POs and PSOs
2	Course Outcomes in internal assessment question paper





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Geo-tagged photos for dissemination of COs, POs and PSOs



Fig: Geo- tagged photo of POs and PEOs displayed at ECE staff room



Fig: Geo- tagged photo of POs displayed at Laboratory





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Fig: Geo- tagged photo of COs displayed at Laboratory





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Fig: Geo- tagged photo of COs displayed at Laboratory





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Fig: Geo- tagged photo of POs displayed at HOD room



Fig: Geo- tagged photo of POs and PSOs displayed at S8 ECE class room





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Name	
PRN No.	
Signature	



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Series Test	2	Year/Semester	4th Year-Semester 7
Subject	ECT413-OPTICAL FIBER COMMUNICATION	Branch	EC
Date of Exam	17 Oct 2023	Duration	1Hour
Starting time	02:00 PM	Max. Marks	60

PART A

Answer All Questions

Q.No		Marks	CO	Level
1	Discuss your understanding on dispersion in optical fibre cable?	3	CO2	L2
2	Draw the diagram of a star coupler and write the significance of it.	3	CO2	L2
3	Differentiate fiber splices and fiber connectors.	3	CO2	L2
4	Consider a silicon avalanche photodiode has a quantum efficiency of 70 percent at a wavelength of 950nm. Suppose 0.5μW of optical power produces a multiplied photocurrent of 15μA. Find (a) the primary photocurrent? (b) the multiplication factor?	3	CO3	L3
5	Differentiate direct modulation and external modulation in laser diode	3	CO3	L2
6	Draw and explain the energy band diagram of PIN photodiode	3	CO3	L2

PART B

Answer 3 out of 6 question(s)

Q.No		Marks	CO	Level
7	a	7	CO2	L2
7	b	7	CO2	L2
OR				
8	a	8	CO2	L2
8	b	6	CO2	L2

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11/15/23, 1:32 PM

ECT413

9	a	Explain macro bending and micro bending losses with neat diagrams.	7	CO2	L2
9	b	An optical fiber has an attenuation coefficient of 0.5dB/km at 1310nm. Find the optical power at 25km if 500μW of optical power is launched into the fiber.	7	CO2	L2
OR					
10	a	Explain the working principle of avalanche photodetector. Also draw the structure of APD.	8	CO3	L2
10	b	Write a note on photo detector noise	6	CO3	L2
OR					
11	a	What is a heterojunction? Explain the working of heterojunction LED with a neat sketch?	7	CO3	L2
11	b	Explain briefly the structure and working principle of a distributed feedback laser diode with neat sketch?	7	CO3	L2
OR					
12	a	Photons of 1300nm wavelength are incident on a pin photodiode at a rate of $5 * 10^{10} S^{-1}$ and the electrons are collected at a rate of $2 * 10^{10} S^{-1}$. Calculate the quantum efficiency and responsivity of the diode.	7	CO3	L2
12	b	Explain external modulation in LASER diode using Mach-Zehnder waveguide interferometer.	7	CO3	L2

CO2 : Solve problems of transmission characteristics and losses in optical fiber

CO3 : Discuss the constructional features and the characteristics of optical sources and detectors

*Level: Knowledge level based on Blooms Taxonomy

[L2. Understanding, L3. Applying]

