E **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 52Q02

M.E. DEGREE EXAMINATION, APRIL 2019

Second Semester

Communication Systems

15PCM202 - Optical Networks

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1.	(a)	Explain the principle of operation of EDFA with neat sketch.	CO1- U	(20)
		Or		
	(b)	What is the need for wavelength conversion? Explain in detail the ways of achieving wavelength conversion.	CO1- U	(20)
2.	(a)	Explain any four test beds for Broadcast and select WDM Networks.	CO2-U	(20)
		Or		
	(b)	Analyze the factors that limit the throughput of Broadcast and select Networks.	CO2- Ana	(20)
3.	(a)	Explain in detail about node design in wavelength routing Networks.	CO3- U	(20)
		Or		
	(b)	Give an account on Wavelength routing test beds.	CO3-U	(10)
4.	(a)	Describe how synchronization is achieved using tunable delays and optical phase lock loop.	CO4- U	(20)
		Or		
	(b)	Explain in detail the Optical Access Network Architecture.	CO4- U	(20)

5.	(a)	Discuss in detail the network management functions.	CO5-Ana	(20)
		Or		
	(b)	(i) What is the need for wavelength stabilization in an optical system? Explain the wavelength stabilization technique.	CO5-Ana	(10)
		(ii) Explain in detail about performance management.	CO5-Ana	(10)