GANPAT UNIVERSITY
M.TECH. SEM. II -ELECTRONICS & COMMUNICATION ENGINEERING
REGULAR EXAMINATION APRIL- JUNE 2016
3EC204 Optical Networks

TIME: 3 HRS   TOTAL MARKS: 60

Instructions: (1) This Question paper has two sections. Attempt each section in separate answer book.
(2) Figures on right indicate marks.
(3) Be precise and to the point in answering the descriptive questions.

SECTION-I

Q.1	A	Describe node architecture of slotted optical packet switched network.	4
	B	What is the impact of traffic changes on a network using serial Optical Add-Drop Multiplexers?	4
	C	Define light tree with example.	2

OR

Q.1	A	Discuss different contention resolution methods in optical packet switched networks.	4
	B	Discuss about different reconfigurable OADM architectures.	4
	C	What is optical burst?	2

Q.2	A	Give difference between point to point WDM (PWDM) ring architecture and fully optical ring architecture. Discuss PWDM ring architecture in detail.	5
	B	Explain different burst assembly algorithms.	5

OR

Q.2	A	Discuss about the node with fixed wavelength conversion capability and limited wavelength conversion capability in WDM network.	5
	B	Draw the block diagram and give details about wavelength routing mesh network.	5

Q.3	A	Explain different burst scheduling algorithms.	5
	B	Write short note on routing in IP network.	5

SECTION-II

Q.4 **A** Define section, line and path in SONET? Give details about Line overhead and Path overhead bytes. **5**

B Explain opaque switch architecture for supporting multicasting. **5**

OR

Q.4 **A** What is the difference between 1+1 OMS and 1+1 OCh protection schemes? Draw and explain both. **5**

B Describe the protection mechanism in Ring interconnection and Dual homing. **5**

Q.5 **A** What are the different scenarios for optical cross connect deployment? Draw and explain all of them. **5**

B Discuss Distributed Relative Capacity Loss (DRCL) algorithm with example. **5**

OR

Q.5 **A** Discuss Least- Used (LU) and Relative Capacity Loss (RCL) algorithms with example. **5**

B Write short note on storage area networks. **5**

Q.6 **A** What is the role of optical line terminal in WDM network? Discuss this with necessary drawing. **5**

B Describe fixed routing and fixed-alternate routing with examples. **5**

END OF PAPER