GANPAT UNIVERSITY
M.TECH. SEM. II -ELECTRONICS & COMMUNICATION ENGINEERING
CBCS REGULAR EXAMINATION, MAY/JUNE-2014
3EC204 Optical Networks

TIME: 3 Hrs.]   [TOTAL MARKS: 70

INSTRUCTIONS:

1. Attempt **all** questions.
2. Answers to the two sections must be written in **separate** answer books.
3. Figures to the right indicate **full** marks.
4. **Assume** suitable data, if necessary.

SECTION-I

Que-1	A	What is the role of optical line terminal in WDM network? Discuss this with necessary drawing.	6
	B	Define section, line and path in SONET? Give details about Line overhead and Path overhead bytes.	6

OR

Que-1	A	Write short note on routing in IP network.	6
	B	Discuss about different reconfigurable OADM architectures.	6

Que-2	A	Discuss Distributed Relative Capacity Loss algorithm with example for Routing and Wavelength Assignment.	6
	B	Write short note on WDM network evolution.	5

OR

Que-2	A	Discuss Relative Capacity Loss algorithm with example for Routing and Wavelength Assignment.	6
	B	Define traffic engineering, network engineering and network planning.	5

Que-3	A	What are the different scenarios for optical cross connect deployment? Draw and explain it.	6
	B	Explain Path, span and ring protection switching in SONET. Discuss about span and ring switching in BLSR.	6

SECTION-II

Que-4 A Discuss different contention resolution methods in optical packet switched networks. — 6

B What is the meaning of unscheduled channel? Discuss different burst scheduling algorithms. — 6

OR

Que-4 A Discuss different contention resolution methods in optical burst switched networks. — 6

B Compare Just-In-Time and Just-Enough-Time algorithms. — 6

Que-5 A What is the difference between 1+1 OMS and 1+1 OCh protection schemes? Draw and explain both. — 6

B Describe unslotted optical packet switched networks. — 5

OR

Que-5 A Explain the protection mechanism in Ring interconnection and Dual homing. — 6

B Draw and explain 1:N protection switching . — 5

Que-6 A Compare PWDM, single hub and fully optical ring architecture based on number of IP router ports per node and number of wavelengths required for a ring with eight nodes. — 6

B What is the impact of traffic changes on a network using serial Optical Add/Drop Multiplexers? — 6

END OF PAPER