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NO. 170

MEDC - 204

M.E./M.Tech., II Semester

Examination, July 2015

Optical Network

Time : Three Hours

Maximum Marks : 70

Note : Attempt any one question from each units. All questions carry equal marks.

Unit - I

1. Describe the Optical Network node and switching elements with the help of diagrams in details.

OR

2. With block diagram, explain the working of an optical communication link. Explain the typical ranges used in optical communication with their advantages.

Unit - II

3. Describe the basic concept of Optical Burst Switching (OBS) networks in details.

OR

4. Explain any two of following:
 - a) Couplers
 - b) Acoustics optical tunable filter
 - c) Multiplexer
 - d) Thermo-optic and SOA switches.

Unit - III

5. Describe the SONET Architecture with the help of diagram.

OR

6. Draw a FDDI reference model and explain its relation with OSI model. Explain with working of a fault tolerant optical LAN.

Unit - IV

7. Explain ALOHA, slotted ALOHA and reservation ALOHA in details.

OR

8. Explain any two of following:
 - a) MAC protocols
 - b) Wavelength reuse reliability
 - c) Network design and operation traffic models
 - d) Static and reconfigurable networks.

Unit - V

9. Write a note on any two of following:
 - a) Optical Time Domain Multiplexing (OTDM)
 - b) Photonic packet switching.
 - c) Virtual topology and circuit switching.
 - d) Terahertz optical asymmetric demultiplexer.
