Code: 9D08204

M.Tech II Semester Supplementary Examinations August/September 2018
OPTICAL NETWORKS
(Computer Networks)
(For students admitted in 2013, 2014, 2015 & 2016 only)

Time: 3 hours   Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks
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1 (a) Explain in detail architecture of telecommunication network.
   (b) Explain about wavelength routed networks.

2 (a) The relative refractive index difference between the core and the cladding of a graded index fiber is 0.7% when the refractive index at the core axis is 1.45. Estimate values for the numerical aperture of the fiber along the axis when the index profile is assumed to be triangular.
   (b) Explain about the RWA algorithm.

3 (a) Explain about the networking process using sparse wavelength conversion.
   (b) Present the graphical representation of convertible network.

4 (a) Explain about the light path migration process.
   (b) Explain about MWPG and AG algorithms.

5 (a) Highlight the advantages of traffic routing over virtual topology.
   (b) Explain about the design of virtual topology.

6 (a) Explain about primary-backup multiplexing.
   (b) Explain about survivability of networks and provisioning.

7 (a) Explain about multicast routing problem.
   (b) Explain about the multicast tree generation process in a network with full splitting capability.

8 (a) Explain the elements of SONET / SDH infrastructure.
   (b) Discuss in detail SDM, TDM and WDM approaches in optical networks.

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