

Seat
No.

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मानव - 007

Advanced Light Wave Communication

P. Pages : 1

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.

1. a) What is dispersion ? Explain intermodal & intermodal dispersion in details. Explain two main causes of intermodal dispersion. 16
b) List the losses observed in optical fiber & explain it.
2. a) Explain in brief advantages & disadvantages of optical fiber transmission link over metallic wire transmission link. 16
b) Explain the concept of Wavelength division multiplexing. State the key feature of WDM.
3. Write detailed notes on : 18
i) Optical Amplifiers.
ii) Receiver Sensitivity.
iii) 2*2 Fiber coupler.
4. a) What is SONET/SDH ? Explain the basic structure of an STS-1 SONET Frame. 16
b) Explain the convenient budget analysis for determining the dispersion limitation of an optical fiber link.
5. a) What is Network Management ? List the network management function & explain its need. 16
b) What is Fiber solitons ? Explain solitons based communication Principles & its amplification.
6. Write detailed notes on : 18
i) WDM Soliton systems.
ii) Single hop & Multihop networks.
iii) Photonic Switching.
