

# Optical Fiber Communication

Written by Administrator  
Saturday, 07 November 2009 07:40 -

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Subject Code

:

**06EC72**

IA Marks

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25

No. of Lecture Hrs/ Week

:

04

Exam Hrs

:







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Digital links – Introduction, point-to-point links, System considerations, link power budget, resistive budget, short wave length band, transmission distance for single mode fibers, tra

Power penalties,

nodal noise and chirping.

## 8 Hours

**Unit - 7**

**WDM Concepts and Components:** WDM concepts, overview of WDM operation principles, WDM standards, Mach-Zehender interferometer, multiplexer, Isolators and circulators, direct thin film filters, active optical components, MEMS technology, variable optical attenuators, tunable optical fibers, dynamic gain equalizers, optical drop multiplexers, polarization controllers, chromatic dispersion compensators, tunable light sources.

## 6 Hours

## Unit - 8

**Optical Amplifiers and NETWORKS:** optical amplifiers, basic applications and types, semiconductor optical amplifiers, EDFA. Optical Networks: Introduction, SONET / SDH, Optical Interfaces, SONET/SDH rings, High – speed light – waveguides.

## 6 Hours

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## Text books:

1. **Optical Fiber Communication** – Gerd Keiser, 4<sup>th</sup> Ed., MGH, 2008.
2. **Optical Fiber Communications** – John M. Senior, Pearson Education. 3<sup>rd</sup> Impression, 2007.

## Reference Book:

1. **Fiber optic communication** – Joseph C Palais: 4<sup>th</sup> Edition, Pearson Education.