



B.Sc. (Electronics) SEMESTER V

Paper I

(Modern Communication Systems)

Unit I

Optical Sources and detector: Working principle and characteristics of LASER and Photo-detector

<https://www.youtube.com/watch?v=Tio94pD-lPQ>

<https://www.youtube.com/watch?v=8CcMRFpljfU>

The evolution of fiber optic systems, block diagram, advantages of optical fiber communication and its applications, Intra modal dispersion, Inter modal dispersion

<https://www.youtube.com/watch?v=VJLkLsqJrbY>

<https://www.youtube.com/watch?v=n1L9l60mjDg>

https://www.youtube.com/watch?v=jbwu6_cajoQ

<https://www.youtube.com/watch?v=YXeO0o1DU6s>

<https://www.youtube.com/watch?v=qYgz4tfoztY>

Transmission characteristics of optical fiber : Attenuation, absorption, scattering losses, bending loss, dispersion

<https://www.youtube.com/watch?v=u1kweXpePA8>

Unit II

Introduction to digital communication, pulse modulation, ,

<https://www.youtube.com/watch?v=Z0Ylnk8zXRo&list=PLgwJf8NK-2e5PngHbdEadEun5XPvnn00N&index=2>

Sampling theorem

<https://www.youtube.com/watch?v=VZ23yvTNjGI&list=PLgwJf8NK-2e6UUsXI-D79KuepPFYEnZnH>

pulse code modulation,

https://www.youtube.com/watch?v=aK117gw_nfU&list=PLgwJf8NK-2e6UUsXI-D79KuepPFYEnZnH&index=16

delta modulation

<https://www.youtube.com/watch?v=vzkLq0tcmhw>

Data coding, asynchronous transmission, synchronous transmission, error detection and correction,

<https://www.youtube.com/watch?v=Q9O8WbG6XKE&list=PLgwJf8NK-2e6WF7zBQyPy7tQCVuE8DIjg>



<https://www.youtube.com/watch?v=crrdZx6u6MQ>

Amplitude shift keying(ASK),

<https://www.youtube.com/watch?v=ucrZlde8vtk>

frequency shift keying (FSK), phase shift keying (PSK),

https://www.youtube.com/watch?v=rrgon8Qne_E

<https://www.youtube.com/watch?v=CCBdeVRMip8>

Unit III

Satellite Communication: Introduction,

https://www.youtube.com/watch?v=WARM4fwsoT4&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC

https://www.youtube.com/watch?v=stwJWP4h970&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC&index=2

Satellite orbits,.

https://www.youtube.com/watch?v=o0Ug9g3N3ps&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC&index=3

geostationary satellites, Application of geostationary satellites, Satellite in Low & medium earth orbits, Satellite Telephone systems using LEO & MEO Satellites

https://www.youtube.com/watch?v=88xUbS7dgww&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC&index=4

https://www.youtube.com/watch?v=aRJV-W9C2Q&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC&index=5

https://www.youtube.com/watch?v=5PA_TSBJKNk&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC&index=6

https://www.youtube.com/watch?v=P8SBx9LuYCg&list=PLVsrfTSIZ_43SERuuAZZ-u1PBnwwn2ZfC&index=7

Unit IV

Mobile Communication : Evolution of Mobile Radio Communication - Cellular concepts – Cellular systems operation – AMPS operation – Digital cellular mobile system – GSM standard and service aspects – GSM architecture, CDMA systems List of the experiments

https://www.youtube.com/watch?v=A97j344LA1M&list=PLzUKfMcBC0HTp9qvTR_cEbY_NhYzNes7BG

<https://www.youtube.com/watch?v=oBiGDhnRI8M>

https://www.youtube.com/watch?v=L1luL74ceHc&list=PLz1qUBU_8618W8rExBmaCOPmVmU2uxihD