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**Module 1****Chapter 2 : Information Theory and Source Codes****2-1 to 2-42****Syllabus :** Information content of a source symbol, Source entropy, Average information rate, AWGN channel, and Shannon-Hartley channel capacity theorem. Introduction of source code, Huffman code, Shannon-Fano code.

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**Module 4**

<b>Chapter 7 : Baseband Transmission</b>	<b>7-1 to 7-30</b>
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**Syllabus :** Block diagram of baseband transmitter-receiver system, Line codes (RZ and NRZ UniPolar formats, RZ and NRZ Polar formats, NRZ Bipolar format (AMI format), NRZ Manchester format, and Quaternary Polar format). Comparison of line codes with respect to bandwidth, power requirement, synchronization capability, DC level, polarity inversion error and complexity. Power spectral density and spectrum of NRZ Unipolar and Polar formats.

Inter Symbol Interference (ISI), Inter Channel Interference (ICI). Nyquist criterion for distortionless baseband binary transmission, Nyquist bandwidth and practical bandwidth.

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**Module 5**

<b>Chapter 8 : Optimum Detection of Baseband Signals</b>	<b>8-1 to 8-36</b>
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**Syllabus :** Matched filter, Output SNR, Transfer function, Impulse response and Error probability. Integrate and dump receiver, Correlator receiver.



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**Module 6****Chapter 9 : Digital Modulation****9-1 to 9-56**

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