



**(Sections 1 to 5 of Chapter 7 in Textbook 1)**



# BAPATLA ENGINEERING COLLEGE::BAPATLA (Autonomous)

| UNIT-III                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                     |
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| <b>Coding Theory:</b><br><br>Introduction to error correcting codes, Basic definitions, Matrix description of Linear Block Codes, Equivalent Codes, Parity Check Matrix, Decoding of a Linear Block Code, Syndrome Decoding, Error Probability after Coding, Perfect Codes, Hamming Codes, Optimal Linear Codes, Maximum Distance Separable codes.<br><br><b>(Sections 3.1 to 3.12 of Chapter 3 in Textbook 2)</b> |                                                                                                                                                                                                                                                                                                     |
| UNIT-IV                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                     |
| <b>Cryptography Basics:</b><br><br><b>Traditional Symmetric – Key Ciphers:</b> Introduction, Substitution ciphers, Transposition ciphers.<br><br><b>(Sections: 3.1, 3.2, 3.3 of Text Book 3)</b>                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                     |
| <b>Text Books :</b>                                                                                                                                                                                                                                                                                                                                                                                                | 1. Cryptography and Network Security, William Stallings, Pearson, 6 <sup>th</sup> Edition, 2014<br>2. Information Theory Coding And Cryptography, Ranjan Bose, Tata McGraw-Hill, 4 <sup>th</sup> Edition, 2005.<br>3. Cryptography & Network Security, Behrouz A. Forouzan, Tata McGraw-Hill, 2010. |