AMI13 DIGITAL SIGNAL PROCESSING

UNIT-1 INTRODUCTION

1.1 Signal, Systems, and Signal Processing,

1.2 Classification of Signals,

1.3 The concept of frequency in continuous-time and discrete-time signals.

UNIT-2 Discrete-Time Signals and Systems

2.3 Discrete-time signals,

2.4 Analysis of discrete-Time linear time-Invariant systems,

2.5 Discrete-Time systems described by Difference equations.

UNIT-3 THE Z-TRANSFORM AND ITS APPLICATION TO THE ANALYSIS OF LTI SYSTEMS

3.1 The z-Transform, Properties of the z-Transform,

3.2 Inversion of the z-Transform,

3.3 The one-sided z-Transform.

UNIT-4 FREQUENCY ANALYSIS OF SIGNALS AND SYSTEMS

4.1 Frequency analysis of continuous-time signals,

4.2 Frequency analysis of discrete-time signals,

4.3 Properties of the Fourier Transform for Discrete-Time signals.

UNIT-5 THE DISCRETE FOURIER TRANSFORM

5.1 Its properties and applications,

5.2 Frequency domain sampling The discrete Fourier transform,

5.3 Properties of the DFT,

UNIT-6 SAMPLING AND RECONSTRUCTION OF SIGNALS

6.1 Introduction, Representation Of A Continuous-Time Signal By Its Samples:

6.2 The Sampling Theorem,

6.3 Sampling With A Zero-Order Hold,

6.4 Sampling Of Bandpass Signals,

6.5 Discrete-Time Processing Of Continuous-Time Signals

Reference Books:

1. Digital Signal Processing, Publisher Katsons, Writer Sanjay Sharma
2. Advance Control system, Publisher Katsons, Writer K M Soni