Module 1

Syllabus : Definitions of signal and system. Standard signals : Step, Ramp, Pulse, impulse, Real and Complex Exponentials and Sinusoids, Classification of signals : Continuous Time (CT) and Discrete Time (DT) signals, Periodic and Aperiodic signals, Deterministic and Random signals, Even and Odd, Energy and Power signals, Basic operations on signals : Folding, Scaling and Time shifting). Convolution in DT domain (Matrix method only).

Module 4

Syllabus : DIT FFT Algorithm (Radix-2)

Module 3

Syllabus : Minimum phase, Maximum phase, Mixed phase and Linear, Phase System based on location of zeros, Low pass, high pass, Band pass and band reject system based on pass band frequency, Magnitude and phase response (only Analytical Method).

Module 5

Syllabus : Introduction to FIR System, Group Delay, phase Delay, Condition for Linear phase FIR system, Window Technique (only Rectangular window function, Hamming Window function)

Module 6

Syllabus : Introduction to IIR System & Bilinear Transformation, Digital Butterworth Filter design using Bilinear Transformation

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