Department of Electronics and Communication Engineering

Assignment -2

Total marks-10

Branch: ECE

Subject & Subject code: Digital Signal Processing (BTEC-502-18)
Semester: 5th
Date on which assignment is given: 05.10.2024   Date of submission of assignment: 15.10.2024

Course Outcomes:

CO1	Analyze the different types of signals and systems.
CO2	Familiarize with the fundamental concepts of convolution and sampling.
CO3	Interpret the concepts of Z transform, DFT and FFT techniques.
CO4	Classify designing and realization concepts of FIR filters.
CO5	Classify designing and realization concepts of IIR filters.
CO6	Demonstrate various DSP processors along with their architectures

Bloom's Taxonomy Levels

L1 – Remembering, L2 – Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating

Assignment related to COs	Marks	Relevance to CO No.	Blooms Levels
Q1. Elaborate the concept of various windowing techniques used for designing of FIR filters	2	CO-4	L3
Q2.Discuss architecture of ADSP with suitable diagram	2	CO-5	L1
Q3. With the help of block diagram,explain the architecture of TMS Processor.	2	CO-6	L2
Q4. Realize the following IIR system function using direct form-II structure: $y(n) = 4/9y(n-1) - 2/5y(n-2) + 2x(n) + 3/7x(n-1)$	2	CO-5	L4
Q5. Compare FIR and IIR filters in detail?	2	CO-6	L3

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.Note: In case of Numerical based subjects, the no. of questions can be increased.

Chandigarh Engineering College-CGC Landran, Mohali

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Evaluation scheme

Subject & Subject code: Digital Signal Processing (BTEC-502-18) 3rd Year/5th Sem

Assignment related to COs	Marks	Relevance to CO No.
Q1. If all the windowing techniques are designed using FIR method then give 2marks	2	CO-4
Q2.If architecture of ADSP with suitable diagram is designed then give 2marks	2	CO-5
Q3. If the architecture of TMS Processor is designed with proper diagram then give 2 marks	2	CO-6
Q4. If structure is realized using IIR system then give 2marks	2	CO-5
Q5. If Comparison of FIR and IIR filters is written properly then give 2 marks	2	CO-6