

2	Define Stability of Discrete Time System. Derive the necessary and sufficient condition to test the stability.	04
3	Give the classification of signals in detail.	07
Q-5	Attempt all questions	(14)
1	Define ACF (Auto-Correlation Function) of a sequence and explain ACF's main properties.	07
2	Explain Z- transform with applications and prove any one property of Z- Transform.	07
Q-6	Attempt all questions	(14)
1	State the properties of FFT explain any two in brief.	07
2	Explain the Decimation in Time FFT algorithm.	07
Q-7	Attempt all questions	(14)
1	Explain types of system with its classification.	08
2	Briefly explain effect of coefficient quantization in filters.	03
3	What is frequency domain sampling? Why it is required?	03
Q-8	Attempt all questions	(14)
1	State and derive necessary and sufficient condition for a discrete time system to be BIBO stable.	07
2	State 'differentiation' and 'time convolution' properties for given transform (Discrete Time Fourier Transform (DTFT) or Z-transform). Prove any one of two properties.	07

