

		Q.3	Attempt (any four questions)	20
L3	C213.3	a	Compute z-transform of $\delta(n)$.	5
L2	C213.3	b	Describe any five properties of z-transform.	5
L3	C213.3	c	Compute z-transform and ROC of finite duration sequence $x(n) = (1/2)^n u(-n)$.	5
L3	C213.3	d	Compute z transform and ROC of $x(n) = a^n$ for $n \geq 0$ else zero.	5
L2	C213.3	e	Illustrate relation between z-transform and Fourier transform.	5
		Q.4	Attempt the following	20
L2	C213.4	a	Find the transfer function $H(z)$ of the system given by $y(n) = y(n-1) - 0.5 y(n-2) + x(n) + x(n-1)$.	4
L4	C213.4	b	Explain direct form-I realization of DT-LTI system.	4
L2	C213.4	c	Explain direct form-II realization of DT-LTI system.	6
L4	C213.4	d	Determine direct form-I realization for the system described by difference equation, $y(n) = 0.5y(n-1) - 0.25y(n-2) + x(n) + 0.4x(n-1)$	6