	SS set 1 Sept 20	
1	Which of the following system is Causal System?	1
	y(n) = x(n)	
	$\mathbf{y}(\mathbf{n}) = \mathbf{x}(\mathbf{n}+2)$	
	$\mathbf{y}(\mathbf{n}) = \mathbf{x}(2\mathbf{n})$	
	$\mathbf{y}(\mathbf{n}) = \mathbf{x}(\mathbf{n}+4)$	
2	Which of the following system is Time Variant System?	2
	y(n) = n.x(n)	
	y(n) = x(n)	
	$\mathbf{y}(\mathbf{n}) = \mathbf{x}(\mathbf{n} - 2)$	
	$\mathbf{y}(\mathbf{n}) = \mathbf{x}(\mathbf{n}+4)$	
3	Which of the following system is Static System?	1
	$y(n) = \cos [x(n)]$	
	$y(n) = \cos [x(n+1)]$	
	$y(n) = \cos [x(n-1)]$	
	$y(n) = \cos \left[x(n^2) \right]$	
4	Which of the following signal is periodic?	2
	$x(n) = \sin(2\pi n)$	
	$x(n) = \sin(2n + \pi)$	
	$\mathbf{x}(\mathbf{n}) = \sin\left(2\mathbf{n}\right)$	
	$x(n) = \sin\left(2n + \pi/2\right)$	
5	Which of the following signal is even?	1
	$\mathbf{x}(\mathbf{n}) = \{3, 2, 1, \frac{0}{1}, 1, 2, 3\}$	
	$\mathbf{x}(\mathbf{n}) = \{3, 2, 1, \frac{0}{\uparrow}, -1, -2, -3\}$	
	$\mathbf{x}(\mathbf{n}) = \{-3, -2, -1, \frac{0}{\uparrow}, 1, 2, 3\}$	
	$\mathbf{x}(\mathbf{n}) = \{3, -2, 1, \frac{0}{\uparrow}, -1, 2, -3\}$	
6	Which of the following signal is Energy signal?	1
	$y(n) = cos(2\pi n); 0 < n < 10$	
	$y(n) = \cos(2\pi n); \ 0 < n < \infty$	

	$y(n) = cos(2\pi n); -\infty < n < 0$	
	$y(n) = \cos(2\pi n); -\infty < n < \infty$	
7	Which of the following signal is Causal Signal?	1
	$\mathbf{x}(\mathbf{n}) = \mathbf{U}(\mathbf{n})$	
	$\mathbf{x}(\mathbf{n}) = \mathbf{U}(-\mathbf{n})$	
	x(n) = U(-n+2)	
	x(n) = U(-n - 2)	
8	Which of the following signal is AntiCausal Signal?	1
	x(n) = U(-n-1)	
	x(n) = U(n-2) - U(n-4)	
	x(n) = U(n) - U(n - 2)	
	$\mathbf{x}(\mathbf{n}) = \mathbf{U}(\mathbf{n} - 2)$	
9	If $x(n) \leftrightarrow X(w)$ then Fourier Transform of the following signal $x(n-k)$ is?	1
	a X(w)	
	$e^{-i\omega k} X(w)$	
	X-(w)	
	X(w - k)	
10	The Laplace transform of the delta signal $\delta(t)$ is given as	1
	1	
	1/S	
	$1/S^2$	
	1/(S+a)	
11	The Laplace transform of the signal $e^{at}U(t)$ is given as	2
	1/(S-a)	
	1/S	
	$1/S^2$	
	1/(S+a)	
12	The Laplace transform of the signal sin wt.U(t) is given as	2
	$w / (s^2 + w^2)$	
	$s / (s^2 + w^2)$	
	$1 / (s^2 + w^2)$	

	$-1/(s^2 + w^2)$	
13	The Laplace transform of the signal cos wt.U(t) is given as	2
	$w / (s^2 + w^2)$	
	$s / (s^2 + w^2)$	
	$1 / (s^2 + w^2)$	
	$-1/(s^2 + w^2)$	
14	The Laplace transform of the signal $x(t) = t$ is given as	2
	$1/s^2$	
	$2/s^3$	
	$6/s^4$	
	$24/s^5$	
15	If signal is even then which component of Trigonometric Fourier series becomes zero	1
	an	
	$\mathbf{b}_{\mathbf{n}}$	
	a_n and b_n	
	None	
16	If time domain signal is continuous and periodic then frequency domain signal is	1
	continuous and periodic	
	continuous and aperiodic	
	discrete and periodic	
	discrete and aperiodic	
17	In the state model of the discrete time system represented by $Q(n + 1) = AQ(n) + BX(n)$, the input matrix is represented by	1
	A	
	В	
	Q(n)	
	X(n)	
18	In the state model of the discrete time system represented by $Y(n) = CQ(n) + DX(n)$, the output matrix is represented by	1

D	
Q(n)	
X(n)	