SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: January 2025-April 2025			
Maximum Marks: 30	Examination: In-Semester Examination		Duration: 1.15 Hrs.
Programme code: 01 Programme: B.Tech. Computer Engineering		Class: TY	Semester: VI (SVU 2020)
Institute/School/ Department: K. J. Somaiya School of Engineering		Name of the department: COMP	
Course Code:	Name of the Course:		

Question No.		Max. Marks
Q1	Perform circular convolution of the two sequences using graphical method. $x_1(n) = \{2, 1, 2, 1\}$ and $x_2(n) = \{1, 2, 3, 4\}$ Or $x(n) = \{-1, 1, 2, -2\}$; $h(n) = \{0.5, 1, -1, 2, 0.75\}$	10
Q2a)	Test the stability of the LTI system whose impulse response is $h(n) = 0.2^n u(n)$	
Q2b)	Determine whether the following signal is periodic or not $x(n) = \cos\left(\frac{5\pi}{9} n + 1\right)$	10
Q3	For the given histogram state and prove what happens when it is equalized twice.	10

Gray Level	0	1	2	3
No. of Pixels	70	20	7	3