Dr. Sunil Datt

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION- APRIL-2019
B.Tech [CSE/IT], IV Semester

COURSE CODE: 10B11EC301   MAX. MARKS: 25
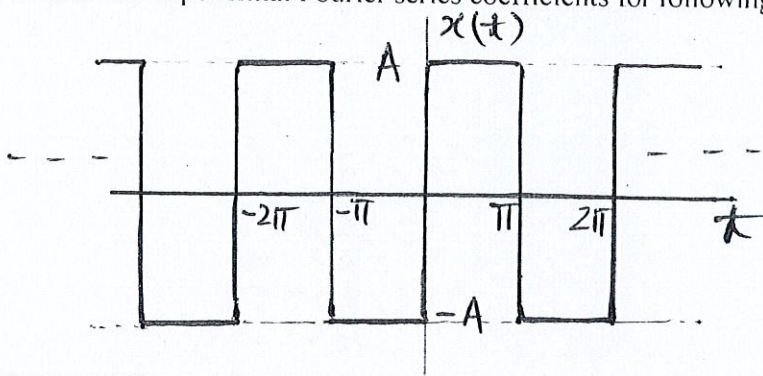
COURSE NAME: Signals and Systems

COURSE CREDITS: 04   MAX. TIME: 1.5 Hours

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

Q.1	For the given signal $x[n] = 2^{-n}(u[n] - u[n-5])$, sketch the following: (i) $y[n] = x[-3n+1]$ (ii) $y[n] = x[1 - \frac{3n}{2}]$	[05]	CO1
Q.2	Determine the exponential Fourier series coefficients for following signal. 	[05]	CO3
Q.3	List the Diritchlet conditions and state the time shifting property of continuous time Fourier series.	[05]	CO3
Q.4	Find the continuous time Fourier transform of $x(t) = Ae^{-b|t|}$, b>0 .	[05]	CO3
Q.5	For given $x(t) = A\{u(t) - u(t-2)\}$. Find the Fourier transform of the following: (i) $y(t) = x(t)\, e^{-j30\pi t}$ (ii) $y(t) = \frac{d^2}{dt^2} x(t-1)$	[05]	CO3