SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION

Accredited AICTE and Accredited by NAAC – UGC with 'A' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

B.E. – Electronics and Communication Engineering

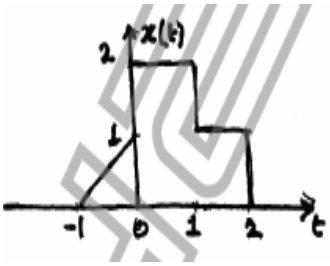
23ECT201 & Signals and Systems

UNIT I - CONTINUOUS AND DISCRETE TIME SIGNALS AND SYSTEMS

QUESTION BANK

PART - A

1. For the signal shown, find x(2t + 3) (Nov/Dec2009)



(or)

Given g(n) $=2e^{-2n-3}$. Write out and simplify the functions (i)g(2-n) (ii) g((n/10)+4) (Apr/May2016)

2. Define Unit Impulse and Unit Step Signal. (Apr/June 2010, Apr/June 2011)
3. Give the mathematical and geometrical representation of CT and DT unit impulse function. (Nov/Dec 2013)
4. State two properties of unit impulse function. (Nov/Dec 2014)
5. Define energy and power signal. (Nov/Dec 2010)

(or)

Define a power signal. (Apr/May 2015)

6. Determine whether the signal x(t) = e^{-2t} u(t) is energy or power signal and calculate the same. (Nov/Dec 2012)
7. Find the fundamental period of x[n] = sin((6π n/7) + 1) (Apr/May 2012)
8. (Apr/May 2013)
9. Define a Random Signal. (Apr/May 2013)
10. What are the classifications of the systems? (Nov/Dec 2009)
11. When is a system said to be memory less? Give an example. (Apr/May 2010)
12. Define Causal System. (Apr/May 2011)
13. Check whether the system y(n) = x(2n) is static or dynamic and causal or non- causal. (Nov/Dec 2012)
14. State BIBO criteria for stability. (Nov/Dec 2010)
15. Check whether v(t) = x(t^2) is LTI. (Apr/May 2012)
16. What are the conditions for a system to be LTI system? (Nov/Dec 2013)
17. Draw the following signals: (a). u(t)-u(t-10) , (b). $(1/2)^n$ u(n-1). (Nov/Dec 2014)

(or)

Sketch the following signals: Rect((t+1)/4): 5 ramp(0.1t) (Apr/May 2016)

18. How the impulse response of a discrete time system is useful in determining its stability and causality. (Apr/May 2015)

19. Find the value of the integral $\int_{-\infty}^{\infty} e^{-2t} f(t+2)dt$. (Nov/Dec 2015)

20. Give the relation between continuous time unit impulse function f(t),step function u(t) and ramp function r(t). (Nov/Dec 2015)