CO – 2 (QUESTION BANK)

1. List the differences between Fourier Transformation and Fourier series.
2. Explain the linearity property of Fourier Transformation.
3. State the time reversal property of Fourier transforms.
4. Find the difference between transfer function and differential equation?
5. What is the condition of LTI system to be stable?
6. Define Hilbert Transform? What are its applications?
7. What are the effects of under sampling a signal?
8. Write short notes on Dirichlet's conditions.
9. Derive Fourier transform from Fourier series.
10. Illustrate the process of signal approximation using orthogonal functions
11. State and prove sampling theorem.
12. Determine the FT of a triangular pulse.
13. Prove the convolution property of Fourier transform.
14. Prove the time differentiation and convolution properties of Fourier transform.
15. Calculate the periodicity of the signal x(t)=2cost+3cos(t/3)
16. Use inverse FT to find Fourier transformation of a signal x(t)=1.
17. Find the FT of a signal x(t)=2 cos (2t)
18. Find the signal x(t), if its FT is X(jΩ) =δ(Ω)
19. Find the FT of x(t) = e^-3t [u(t-2)]
20. A signal x(t) having the Nyquist rate 1000 samples/sec. Find the Nyquist rate of signal (i) x(t)+y(t), and (ii) x(t)y(t), where signal y(t) having bandwidth 720Hz.