Department of electronics and telecommunication

Subject: Signals and Systems Set-B CT-2 Time:1Hr 15M

QA Solve any three from following questions.(Bold no. in bracket indicates position of n=0th sample)

Q1) Prove the following properties of Fourier transform

(i)Linearity (ii)Frequency shifting (iii)Time shifting (iv) Time reversal

Q2)If the i/p sequence x(n) =**1/3 ; for -1≤ n ≤1**

= 0 otherwise is applied to a system whose unit sample response is h(n) =a^n u(n) compute magnitude and phase spectrum of output.

Q3)Find DFT of x(n) = {1,1,1,1} by matrix method. Also draw its magnitude and phase spectrum.

Q4)If x(n)={....0,**1**,-1,0.....} find Fourier transform and sketch its magnitude and phase spectrum.