

Subject: \_\_\_\_\_

Year: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_

2- پانچ بل سیسٹم [T] لیسٹہ باا سٹخ منبر  $h[n] = (3)^n u[n+2]$  پر ورتلوی

$$h[n] \cdot \left(\frac{1}{2}\right)^n (u[n] - u[n-1])$$

$$g[u] = \sum_{-\infty}^{\infty} x[n] h_k[n] = \sum_{-\infty}^{\infty} \left(\frac{1}{2}\right)^n (u[n] - u[n-1]) x[n]$$

$$(3)^n u[-n+2]$$

$$= \sum_{-\infty}^{\infty} \left(\left(\frac{1}{2}\right)^{n-1} u[n] - \left(\frac{1}{2}\right)^{n-1} u[n-1]\right) \cdot 3^n u[-n+2]$$

$$= \sum_{-\infty}^{\infty} \left(\frac{1}{2}\right)^{n-1} 3^n u[n] u[n+2] - \left(\frac{1}{2}\right)^{n-1} 3^n u[n-1] u[n+2]$$

۱- فرض کنید  $h[n] = 2\delta[n+1] - \delta[n-2]$ ,  $x[n] = \delta[n] + 2\delta[n+1]$  است. ما فرمول

$$x[n+1] \Rightarrow x[n+1] = \delta[n+1] + 2\delta[n+2] \quad x[n+1] * h[n+1]$$

$$h[n-1] \Rightarrow h[n-1] = 2\delta[n] - \delta[n-3]$$

$$x[n+1] * h[n-1] = x[n] * h[n'] = \int_{-\infty}^{+\infty} x(\lambda) h(\lambda - x) d\lambda$$

تغییر فرم  $n'$

Subject: .....

Year: ..... Month: ..... Day: .....

$$\int_{-\infty}^{+\infty} (\delta[n] + 2\delta[n+1]) / (2\delta[n+1] - \delta[n-2])$$



(3) بالشرح والبيان  $LT$  دالة  $h(t) = e^{t+1} u(t-5)$  بالشرح والبيان  $x(t) = 2e^{t-1} u(t)$

$$y(t) = \int_{-\infty}^{\infty} x(\lambda) h(t-\lambda) d\lambda$$

$$= \int_{-\infty}^{\infty} 2e^{\lambda-1} u(\lambda) \times e^{t-\lambda+1} (u(t-\lambda) - u(t-\lambda-5)) d\lambda$$

$$\int_{-\infty}^{\infty} 2e^{\lambda-1} \times e^{t-\lambda+1} (u(\lambda) \cdot (u(t-\lambda))) d\lambda = \int_{-\infty}^{\infty}$$

$$2e^{\lambda-1} u(\lambda) e^{t-\lambda+1} u(t-\lambda-5)$$