

MAKE ASSUMPTIONS, IF NECESSARY.

Prob. 1 Compute the convolution between $x[n]$ & $h[n]$
 (a) Graphically ; (b) Any other way,
 where $x[n] = 4\delta[n+3] - 2\delta[n+1] + 3\delta[n] - 5\delta[n-2]$
 & $h[n] = 3\delta[n+1] + 2\delta[n] + 3\delta[n-1]$. (8)

Prob. 2 State whether true or false. Also justify your answer (No credit if NO justification is given)

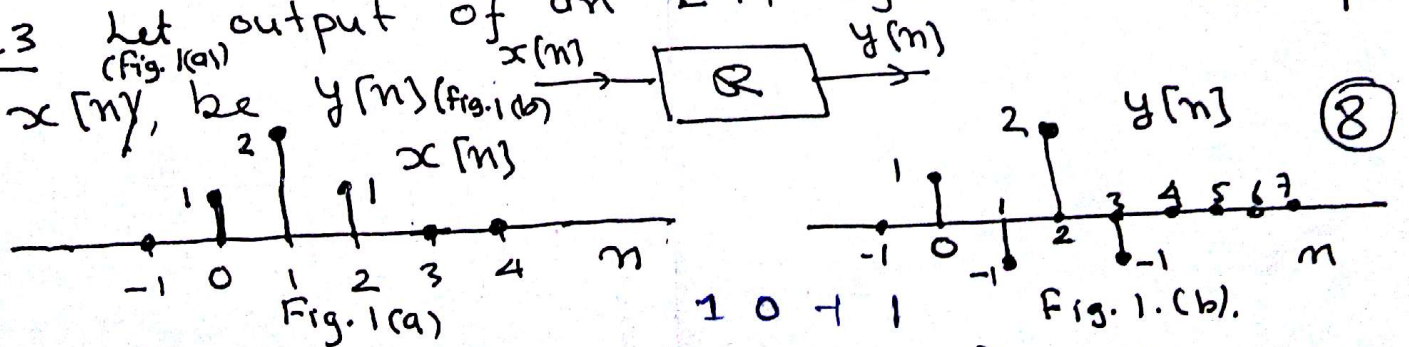
(a) $x[2n]$ is periodic, if $x[n]$ is periodic. (Also find period if true).

(b) $x[n]$ is periodic, if $x[2n]$ is periodic. (Also find period if true). (9)

(c) Composition of a causal system with a non causal system is always non causal.

(d) An LTI system is stable if and only if its response to unit step function is absolutely integrable.

Prob. 3 Let output of an LTI system to the input $x[n]$ be $y[n]$



Compute the response (output) of the system to the inputs given in fig 1(c) & fig. 1(d)

