a) \( y(t) = x(t) + x(t-\tau) \)  

\[ \text{LTI : } H(f) = 1 + e^{j\omega \tau} \]

b) 

![Signal Flow Diagram]

c) 

\[ H(f) = H_c(f)e^{-j\alpha \tau_c} + \frac{\beta f}{1 - H_c(f)}e^{j\gamma \tau_m} \]

\[ |H(f)| = \sqrt{|H_c(f)|^2 + |1 - H_c(f)|^2} \]

\[ \text{NOTE: } H_c(f), (1 - H_c(f)) \text{ does not depend on delay} \]