CHAPTER 4

Baseband Pulse Transmission

Problem 4.1

(a) The impulse response of the matched filter is

\[ h(t) = s(T-t) \]

The \( s(t) \) and \( h(t) \) are shown below:

(b) The corresponding output of the matched filter is obtained by convolving \( h(t) \) with \( s(t) \). The result is shown below:

(c) The peak value of the filter output is equal to \( A^2T/4 \), occurring at \( t=T \).