Digital signal processing 2006

Question 1

Answer the following questions   [2×10

(a)

What is Nyquist rate? Compute the Nyquist rate for the given analog signal.

   $X_a(t)=5\cos50\Pi t+ 10\sin 300\Pi t-5\cos\Pi t$.

(b)

Determine the signal having the following Fourier transform.

   X(w