EE 150L
Signals and Systems Lab

Lab5 Sampling and Reconstruction

Date Performed:

Class Id:

Name and Student ID:

1. If $\mathcal{F}[f(t)] = F(\omega)$, verify that $\mathcal{F}[f(t)\cos(\omega_0 t)] = \frac{1}{2}[F(\omega + \omega_0) + F(\omega - \omega_0)]$.

   提示：可利用欧拉公式及傅里叶变换的频移性质

2. Briefly explain your understanding of Nyquist's sampling theorem.