Math 301-152   Quiz 3 A

Name:..Sec#:................ID#:...............................Ser#:.........

Q:1 (3 points) Find the Laplace transform: $\mathcal{L}\{f(t)\}$, where $f(t) = \begin{cases} \sin(t), & 0 \le t < \pi \\ 2t\cos(t), & t \ge \pi \end{cases}$.

Q:2 (2 points) Find the following:
$\mathcal{L}^{-1}\left\{\dfrac{3s-4}{s^2+6s+25}\right\}$.

Q:3 (4 points) Solve the differential equation $y'' + 2y = \cos(t)\mathcal{U}(t - 2\pi)$ with $y(0) = 1$ and $y'(0) = 0$.