Math 301-161 Quiz 4 (A)

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

Q:1 (3 points) Find the Laplace transforms:

$$\mathcal{L}\left\{t\int_0^t e^{\tau}\cos 2(t-\tau)d\tau\right\}$$

Q:2 (4 points) Solve the differential equation $y''+4y'+13y=\delta(t-\pi)$ with $y(0)=1$ and $y'(0)=0$

Q:3 (4 points) Solve the integral equation $f(t) + 2\int_0^t f(\tau)\cos(t-\tau)d\tau = 4e^{-t} + \sin t$.