Math 301-162 Quiz 3 (A)

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

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

$$f(t) = \begin{cases} \sin 2t & 0 \leq t < \frac{\pi}{6} \\ e^t \cos 2t & t \geq \frac{\pi}{6} \end{cases}$$

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 $f(t) + 2\int_0^t f(\tau)\cos(t-\tau)d\tau = \sin t$.