

Math 301-152 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 $f(t) + 2 \int_0^t f(\tau) \cos(t - \tau) d\tau = 4e^{-t} + \sin t$.