# EE206 Assignment 4 *

Due 28th Oct.

1. Solve the given differential equations by undetermined coefficients
   (a) $y'' + 4y' + 4y = \cos(x) + 3\sin(2x)$
   (b) $y'' - 10y + 25y = 40x + 3$
   (c) $\dfrac{d^2x}{dt^2} + \omega^2 x = F_0 \sin(\omega t)$, $x(0) = x'(0) = 0$;
2. Solve the given differential equations by variation of parameters
   (a) $4y'' - y = xe^{\frac{x}{2}}$, $y(0) = 0$, $y'(0) = 1$
   (b) $y'' + 2y' - 8y = 2e^{-3x} - e^{-x}$, $y(0) = 1$, $y'(0) = 0$
   (c) $y'' + y = \sec(x)\tan(x)$

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