

Quiz 6, Math 246, Professor David Levermore
Tuesday, 10 October 2017

Your Name:

Discussion Instructor (circle one): Yan Tay Jing Zhou
Discussion Time (circle one): 8:00 9:00 10:00

No books, notes, calculators, or any electronic devices.
Show your reasoning for full credit. Good luck!

- (1) [2] Given that e^{-t} is a particular solution of the equation

$$v'' + 4v' + 13v = 10e^{-t},$$

give a general solution.

- (2) [3] Give the degree, characteristic, and multiplicity for the forcing term of the equation

$$v'' + 4v' + 13v = 5t^7 e^{-2t} \sin(3t).$$

- (3) [5] Find a particular solution of the equation

$$u'' - 4u = 8e^{2t}.$$