

Quiz 5, Math 246, Professor David Levermore
Tuesday, 9 October 2018

Your Name:

Discussion Instructor (circle one): Sid Sharma Anqi Ye
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 $2e^{-t}$ is a particular solution of the equation

$$u'' + 4u' + 13u = 20e^{-t},$$

give a real general solution.

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

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

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

$$w'' - 6w' + 9w = 8e^{3t}.$$