Name: _____ COL7(6)83 Quiz 5 Entry no.: _____

9 September, 2025

1. You are given an image g degraded by both additive noise and blur. The only additional knowledge you have is that you can identify which regions should have constant intensity and which should contain texture or other intensity variations. Can you determine (i) the mean, and (ii) the variance of the additive noise? If so, how; if not, why not?

2. A fundamental barrier in deconvolution is that at frequencies (u, v) where $H(u, v) = 0$, information about the original image is completely lost. What is the behaviour of Wiener filtering at such frequencies? Assume both the image and the noise have nonzero spectra.